

# **THEODORE PANAYOTOU**

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Director  
Environment and Sustainable Development  
Center for Intl. Development  
Harvard University

John Sawhill Lecturer  
in Environmental Policy  
John F. Kennedy School of Government  
Harvard University

## **PERSONAL**

Birth: May 22, 1948, Cyprus  
Citizenship: Cyprus and Canada; US permanent resident  
Status: Married, two daughters and one son  
Languages: Fluent in English and Greek; Proficient in Spanish and Thai; Fair in French

## **EDUCATION**

Ph.D., Economics, University of British Columbia, Vancouver, BC, Canada, February 1978;  
Specialization in Natural Resource Economics; Environmental management; International  
Development.  
M.A., Economics, York University, Toronto, Ontario, Canada, 1973; Specialization in Development  
Economics and Quantitative Methods.  
B.A., Economics (Honors), University of Athens, Greece, 1972; Specialization in International  
Economics, Natural Resources and International Law.

## **ACADEMIC AWARDS**

1982–83 Kasetsart University Distinguished Research Award (Thailand)  
1978–80 Rockefeller Foundation Post-Doctoral Fellowship (USA)  
1973–76 University of British Columbia Graduate Fellowship (Canada)  
1972–74 Bank of Cyprus Scholarship Fund (Cyprus)  
1972–73 York University Graduate Stipend (Canada)  
1967–72 National Foundation Fellowship (Greece)

## **HONORS**

Recipient of the Distinguished Achievement Award (1991) of the Society for Conservation Biology  
“in recognition of efforts to utilize economic analysis as a tool in environmental conservation.”

## **AREAS OF SPECIALIZATION**

Natural and Resource Economics; Environmental Economics; Forest management; Sustainable Development; Environment-Development Interactions; Environmental Law; Policy Analysis.

## **AREAS OF RESEARCH INTEREST**

Economic valuation of forests and biodiversity  
Determinants of land use change  
Water pricing and trading  
Financing mechanisms for sustainable development  
Market-based instruments for sustainable development  
Tropical Forest Management  
Trade and environment  
Climate change and development

## **COUNTRY EXPERIENCE** (partial list)

### **Argentina**

Sustainable agricultural development of the Pampas; land use policy

### **Belize**

Coastal zone management

### **Central America**

Carbon markets  
Free trade of environment  
Ecotourism  
Sustainable agriculture  
Causes of Deforestation

### **Chile**

Mining taxation  
Optimal copper depletion  
Accounting for resource depletion and sustainability  
Rent reinvestment

### **China**

Energy policy and environmental management  
Forest product pricing and optimal timber taxation  
Use of market-based instruments in a command economy

### **Cyprus**

Transferable development rights in forest conservation  
Water pricing  
Tourist policy and coastal zone management  
Environmental assessment and action plan

### **Egypt**

Energy efficiency  
Institutional pollution  
Sustainable tourism

### **El Salvador**

Restructuring national institutions for sustainable development

Valuation of environmental damages

Principles of incentive-based environmental law

Environmental Action Plan

**Eastern Europe (including Russia)**

Fiscal and financial incentives for environmental management

Economics of environmental liability

Environmental implications of industrial restructuring

**Honduras**

Economic valuation of coral reefs

Economics of ecotourism

**India**

Strengthening teaching and research in Environmental Economics and Policy

**Indonesia**

Forest policy and forest taxation

Coastal fisheries

Energy pricing

**Lao PDR**

Environmental and social impacts of Nam Theun II Hydroelectric Project

**Middle East**

Water pricing and trading

Regional water resource management

**Non-EU Mediterranean**

Trade and environment

Privatization and environmental liability

Clean air policy

Financing environmental improvements

**North Africa (Morocco, Tunisia, Egypt)**

Natural Resource and Environment Strategy

**Panama**

Draft of environmental framework law; interactions among tropical forest uses

**Peru**

Primates as renewable resources, an evaluation; forest policy

**Philippines**

Territorial use rights in fisheries

Coastal zone management

**Sri Lanka**

Rent dissipation and traditional community fishing rights

**Thailand**

Property rights, water pricing, causes of deforestation, fiscal and financial incentives for environmental management, fishery economics, structural adjustment and the environment, market-based instruments for hazardous waste management

**Vietnam**

Environmental implications of economic reforms

A sustainable development model for a surplus-labor economy

**Venezuela**

Environmental management of Lake Maracaibo; land use

**Zambia**

Optimal depletion of copper resources and rent allocation

## **CURRENT EMPLOYMENT**

Director, Environment and Sustainable Development, Center for International Development, John F. Kennedy School of Government, Harvard University.

John Sawhill Lecturer in Environmental Policy, John F. Kennedy School of Government, Harvard University.

Co-Director and Adjunct Professor of Environmental Management, Cyprus International Institute of Management (CIIM), Nicosia, Cyprus

Advisor on Environmental Economics governments in Central America, Eastern Europe, and the Middle East, and to International Organizations (e.g., UNDP, FAO, ADB).

## **HONORARY POSITIONS**

Faculty Fellow, Environmental Economics Program at Harvard University

International Member, China Council for International Cooperation on Environment and Development.

Advisory Committee, Pew Scholars Program in Conservation and Environment, Pew Charitable Trust, Philadelphia, PA.

National Committee for the Establishment of the National Institutes for the Environment (NIE), by the US Congress, Washington, DC.

Board of Directors, Center for Tropical Forest Science (CTFS), The Smithsonian Institution, Washington, DC.

Biodiversity Research Panel, National Academy of Sciences, Washington, DC.

Task Force for Tropical Diseases and the Environment, World Health Organization (WHO), Geneva, Switzerland.

Advisory Board, Center for Tropical Conservation, Duke University, Durham, NC.

Board of Directors, Enalion Environmental Management Centre, Nicosia, Cyprus.

Board of Directors, Thailand Environment Institute, Bangkok, Thailand.

## **RECENT ACTIVITIES**

Development and management of the Environment and Natural Resources Program at the Harvard University Center for International Development.

Development and management of HIID's International Environment Program.

Research on natural resource economics and management as they relate to economic development and on macroeconomic policy.

Advisory and research projects in Eastern Europe, Latin America, Southeast Asia, and the Middle East in the areas of natural resource economics and environmental management.

Principal Investigator and Research Team Leader on Environmental Economics and Policy Analysis in Eastern Europe (USAID/HIID).

Principal Investigator and Director of Environmental Economics and Policy Research and Training Project in Asia (USAID/HIID).

Principal Investigator and Team Leader, Management of Natural Resources (MANRES) Project in Thailand. (A joint environmental policy research project of HIID and the Thailand Development Research Institute).

Principal Investigator and Director of Forest Economics and Policy Project (EPA/HIID).

Development and teaching of Econ. 1366/PED 267 (Natural Resource Economics in Developing Countries) in the Department of Economics and the Kennedy School of Government; and of Econ. 368/PED 268 (Advanced Topics in Sustainable Development) (taught jointly with Anil Markandya and Jeffrey Vincent).

Development and management of HIID's annual five-week summer workshop, "Environmental Economics and Policy Analysis"; curriculum development, case writing, and teaching sessions on valuation methods and market-based instruments.

Development and management of HIID's summer program on Climate Change & Development. Principal Investigator, Environment and Natural Resources & Central America Project on Competitiveness & Sustainable Development (Co-directed by Jeffrey Sachs and Michael Porter). Director, Forestry Research Projects in South America (Dominant versus Multiple Use Management): currently active in Brazil, Peru and Venezuela.

Development of a research, training and advisory program on Natural Resource Management at HIID and participation in activities promoting Harvard's environment-related activities (e.g., China Focus Research Group).

## **PREVIOUS EMPLOYMENT**

Associate and Country Representative (Thailand) of the Agricultural Development Council and Winrock International, Route 3, Morrilton, AR 72110. Tel: (501) 727-5435, and Visiting Professor of Economics, Kasetsart and Thammasat Universities, Bangkok, Thailand, 1982–1985. Responsibilities: coordinating multi-agency research programs; analysis and resource management; writing policy analysis papers for government agencies; teaching graduate courses in natural resources economics; and organizing conferences and workshops on development policy issues.

Program Specialist with the Agricultural Development Council, 725 Park Avenue, 4th Floor, New York, 10021. Visiting Professor of Economics, Kasetsart University, Bangkok, Thailand, 1981–82. Rockefeller Foundation Special Staff for Policy Analysis/Visiting Professor of Economics, Faculty of Economics, Kasetsart University, Bangkok, Thailand, 1980.

Rockefeller Foundation Fellow/Visiting Professor of Economics, Faculty of Economics, Kasetsart University, Bangkok, Thailand, 1978–79.

Economic Consultant, Criterion Analysis, Dallas, Texas, 75214, 1974.

Economist, Ministry of Finance, Cyprus, 1972.

## **CONSULTANCIES/ADVISING (past and present)**

The American Association for the Advancement of Science (AAAS), Washington, DC, 1989.

The Smithsonian Institution, Washington, DC, 1989.

The National Science Foundation, Washington, DC, 1989.

United Nations Development Program (UNDP), 1991–1994.

Organization of Economic Cooperation and Development (OECD), 1990–92.

The World Wildlife Fund (US and International), 1991–1994.

World Bank, World Development Report, 1991.

Ford Foundation, Southeast Asia Regional Office, Jakarta, Indonesia, 1984–85.

The United States Agency for International Development, (USAID), Washington, DC, and Thailand Mission, 1987–94.

Canadian International Development Agency (CIDA), 1993.

The International Development Research Center (IDRC), Ottawa, Canada, 1978-85.

Traveled on professional assignments throughout South and Southeast Asia, the Middle East, Eastern Europe, the former Soviet Union, and parts of Latin America, and coordinated research projects in Bangladesh, Indonesia, Malaysia, Philippines, Sri Lanka, Thailand, and the Middle East. The Food and Agriculture Organization (FAO) of the United Nations, Rome, Italy, 1981–83, 1994 The World Resources Institute, Washington, DC, 1989.

The International Tropical Timber Organization (ITTO), Yokohama, Japan, 1988–1991.

The International Center for Living Aquatic Resources Management (ICLARM), Manila, Philippines, 1985–86.

The National Economic and Social Development Board (NESDB), Bangkok, Thailand, 1980–85, 1989.

Thailand Development Research Institute (TDRI), 1985–94.

Cyprus Development Bank (CDB), 1989–94.

Cyprus International Institute of Management (CIIM), 1991–1994.

United Nations Environment Program, 1994-1997, 2000.

## **TEACHING EXPERIENCE**

Developed and taught Political and Economic Development (PED) 267/Economics 1366, Natural Resource Economics in Developing Countries, jointly offered by the Kennedy School of Government and the Department of Economics, Harvard University, 1986, 1987, 1988, 1989, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998 and 1999. (Currently taught jointly with Jeff Vincent).

Developed and taught PED 268/Economics 1368, Advanced Topics in Sustainable Development, a new course introduced to the Department of Economics and the Kennedy School of Government, 1993-94; and 1997-98 (jointly with Bruce Larson).

Co-developed and co-taught Economics 2696, Economic Development of Southeast Asia (taught Jointly with D. Snodgrass, J. Stern and D. Cole) Department of Economics, Harvard University, 1987, 1988, and 1989.

Developed and taught an MBA/MPA course (a week-long 40 hours module) on “Environmental Management of Investment Projects” at the Cyprus International Institute of Management (CIIM) Nicosia, Cyprus, 1992, 1993, 1994, 1995, 1996, 1997.

Economics 985D, Development Thesis Seminar for Seniors, Department of Economics, Harvard University, 1986 and 1987.

Developed and taught Natural Resource Economics, Faculty of Economics, Thammasat University, Bangkok, Thailand, a new graduate course, 1983-85.

Developed and taught Agricultural Policy Analysis, Natural Resource Economics and Fisheries Management, three new graduate courses, Faculty of Economics and Business Administration, Kasetsart University, Bangkok, Thailand, 1978–1984.

Intermediate Microeconomics and Macroeconomics, Department of Economics, University of British Columbia, 1976–77.

## **TRAINING WORKSHOPS** (partial list)

Environmental Economics and Policy Analysis Workshops, HIID. An annual five-week workshop attended by 60 mid-career policy makers and policy analysts from some 30 –40 countries: 1993, 1994, 1995, 1996, and 1997.

“Economic Valuation of Environmental Impacts of Development Projects.” A three-day workshop for the Asian Development Bank staff.

“Innovative Instruments for Environmental Management.” A three-day workshop for the Asian Development Bank.

“Environmental Management of Private and Public Sector Projects: Economic Analysis.” A one week workshop for Cyprus International Institute of Management, Nicosia, Cyprus.

Annual Policy Seminar on Sustainable Development for Asian senior policy makers, Pattaya 1993, Bali 1994, New Delhi 1995, Bangkok 1997.

Workshop on “Economic Instruments for Environmental Management” Kingston, Jamaica, 1995

Workshop on “Economics and Financing of Biodiversity” Bogota, Colombia, February, 1995

## **OVERSEAS RESIDENCY**

Resident Advisor in Thailand for eight years with the Rockefeller Foundation and the Agricultural Development Council, 1978–1985.

Resident Advisor to the Thailand Development Research Institute during July–December 1985, June–August 1986, and March 1990–May 1991, with HIID.

## **CONFERENCES/MEDIA INTERVIEWS**

Workshop on “Capacity Building in Environmental Economics in Developing Countries,” Goteberg, Sweden, May 1996.

Keynote speaker on “Economic Instruments for Sustainable Development” at Thailand Environment Institute Conference, Bangkok, October 1996.

Presentation on “Environmental Economics” to the Queen of Spain and the Royal Academy in Madrid, October 1996.

Paper on “Common Errors in Valuation” presented at EEPSEA meeting in Singapore, November, 1996.

Keynote presentation “Taking Stock of Trends in Sustainable Development Financing Since Rio” at UNCSD Financing Conference in Santiago, Chile, January 1997.

Organized and chaired an invited session of the American Economics Association in New Orleans on “Environmental Economics in Transitional Economies,” January, 1997.

Asia Environmental Policy and Training Seminar, “Fostering a Clean Industrial Revolution,” Bangkok, Thailand, February, 1997.

Speaker on “Economy and Sustainable Agriculture” at Harvard University Conference in Buenos Aires, Argentina, March 1997.

Keynote Speaker on “Sustainable Development,” United World Colleges Reunion, Harvard University, March 1997.

“Institutional Proposal” to the President and Cabinet of El Salvador for the establishment of a Ministry of the Environment and Natural Resources, April, 1997. Proposal accepted and implemented as of June 1, 1997.

APEC Keynote Speaker, “Can Asia Grow Cleaner as it Grows Wealthier?”, Asian Pacific Foundation of Canada, Banff, Alberta, Canada, May 1997.

“Emerging Asia” presentations in Boston and Washington, DC, May, 1997.

Interviewed on “Population and Environment” for Asahi Shimbun in May, 1997 and by *New York Times* on “Green National Accounts”, October, 1996.

Guest Editor of a Special Issue of the *Environment and Development Economics* journal on “Environmental Economics and Policy in Transitional Economies,” 1997.

## **A. RESEARCH AND PUBLICATIONS (1989-2001)**

### **BOOKS**

Panayotou, T. (ed.) 2001. *Environment for Growth in Central America: Environmental Management for Sustainability and Competitiveness*, Cambridge, MA: Harvard University Press.

Panayotou T. and Z. Zheng 2000. *The Cost of Environmental Damage in China: Preliminary Assessment and Valuation Framework*, Bethesda, MD: Aileen International Press for the China Council for International Cooperation on Environment and Development.

Panayotou, T. and W. Yajun 1999. *Green Taxation: National Experience and Relevance to China*, Bethesda, MD: Aileen International Press for the China Council for International Cooperation on Environment and Development.

Panayotou, T. 1998. *Instruments of Change: Motivating and Financing Sustainable Development*, Earthscan Publications, London.

Panayotou, T. and C. Restrepo and R. Faris. 1997. *Green Book: From Peace to Sustainable Development: A Call to Action*. El Salvador: FUSADES/CODES; Spanish translation: *El Desafío Salvadoreño: De la Paz al Desarrollo Sostenible*. Una iniciativa de FUSADES/CODES.

Panayotou, T. 1995. *Green Markets: The Economics of Sustainable Development*. San Francisco: ICS Press for the International Center for Economic Growth, 1993; Spanish translation: *Ecología, Medio Ambiente y Desarrollo: Debate, Crecimiento vs. Conservación*, Ediciones Gernika, S.A.; Portuguese translation: *Mercados Verdes: A Economia do Desenvolvimento Alternativo*, Rio de Janeiro: Nordica; Vietnamese translation: *Thị Trường Xanh: Kinh Tế Của Phat Trien Ben Vung*, Sach Duoc in Voi Su Tai Tro Cua EEPSEA - SIDA.

Panayotou, T. and P. Ashton. 1992. *Not By Timber Alone: Economics and Ecology for Sustaining Tropical Forests*. Washington, DC: Island Press.

Panayotou, T., R. Sukharom and S. Sathirathai. 1991. *Natural Resources*. Bangkok: Obor Foundation/Kobfai Publisher.

### **JOURNAL ARTICLES**

Panayotou, T., J. Sachs and A. Zwane. 2001. "Compensation for 'Meaningful Participation' in Climate Change Control: A Modest Proposal and Empirical Analysis." Forthcoming in *Journal of Environmental Economics and Management*.

Bluffstone, R. and T. Panayotou. 2000. "Environmental Liability and Privatization in Central and Eastern Europe: Toward an Optimal Policy." *Environmental and Resource Economics* **17**: 335-352.



- Panayotou, T. 1999. "The Economics of Environments in Transition." *Environmental and Development Economics* 4 (1): 389.
- Boscolo, M., J. Buongiorno and T. Panayotou. 1997. "Simulating Options for Carbon Sequestration through Improved Management of a Lowland Tropical Rainforest." *Environment and Development Economics* 2: 241-263.
- Islam, N., J.R. Vincent, and T. Panayotou. 1997. "Unveiling the Income-Environment Relationship: An Exploration into the Determinants of Environmental Quality." (with N. Islam and J. R. Vincent) Submitted to *Quarterly Journal of Economics (QJE)*.
- Panayotou, T. 1997. "Demystifying the Environmental Kuznets Curve: Turning a Black Box into a Policy Tool." *Environmental and Development Economics*, 2(4): 465-484.
- Panayotou, T. 1997. "New and Innovative Ways to Finance Sustainable Development." *Our Planet* 9(1): 15-18. Span. Trans.: "Finanzas con doble ganancia" *Nuestro Planeta* 9(1): 15-18.
- Panayotou, T. and J.R. Vincent. 1997. "Environment and Competitiveness." *Global Competitiveness Report*.
- Panayotou, T., J.R. Vincent and J.M. Hartwick. 1997. "Resource Depletion and Sustainability in Small Open Economies." *Journal of Environmental Economics and Management*, also in Environmental Discussion Paper No. 8, Cambridge, MA: Harvard Institute for International Development, 1995.
- Vincent, J.R. and T. Panayotou, 1997. "Consumption: Challenge to Sustainable Development or Distraction?" (with Jeffrey R. Vincent) *Science* 4 April, 276:53-55; also in Development Discussion Paper No. 567, 11 pp., Cambridge, MA. Harvard Institute for International Development.
- Panayotou, T., and P. Ashton. 1995. "Sustainable Use of Tropical Forests in Asia." *Ecological Economics*, Special Issue, 2nd Conference on "Ecology and Economics of Biodiversity Loss," Beijer Int. Inst. Eco. Econ.; also in *Biodiversity Conservation*. (C. Perrings, K.G. Mäler, *et al.*, eds.), 257-77, The Netherlands: Kluwer Academic Press.
- Panayotou, T. 1994. "Conservation of Biodiversity and Economic Development: The Concept of Transferable Development Rights." *Environmental and Resource Economics* 4:91-110.
- Panayotou, T. 1994. "Sustainable Development and Economic Growth." *Forum* 3(3): 3.
- Panayotou, T., V. Balaban and R. Bluffstone. 1994. "Lemons and Liabilities: Privatization, Foreign Investment, and Environmental Liability in Central and Eastern Europe." *Environmental Impact Assessment Review* 14: 157-168, Massachusetts Institute of Technology.
- Panayotou, T. 1993. "The Environment in Southeast Asia: Problems and Policies." *Environmental Science and Technology* 27(12): 2270-2274.

Panayotou, T. 1993. "An Innovative Economic Instrument for Hazardous Waste Management: The Case of the Thailand Industrial Environmental Fund." *Greener Management International*, 21-27, London.

Panayotou, T. 1992. "Climate Change Negotiations From the Perspective of Newly Industrializing Countries: The Case of Thailand." *The Harvard Journal of World Affairs*, Spring: 116-127.

Panayotou, T. 1992. "United Nations Development Program's Environmental Management and Sustainable Development in Technical Assistance (EMG): Four International Experts Respond." *Environmental Impact Assessment Review* 12: 139-153.

Panayotou, T. and D. Phantumvanit. 1991 "Rural Natural Resources Management: Lessons from Thailand." *TDRI Quarterly Review*.

Panayotou, T. 1990. "Counting the Cost: Resource Degradation in the Developing World." *The Fletcher Forum*.

Panayotou, T., P. Kritiporn and K. Charnpratheep. 1990. "Industrialization and Environment in Thailand: A NIC at What Price?" (with ) *TDRI Quarterly Review*, Bangkok, Thailand.

Panayotou, T., S. Sethaputra and V. Wangwacharakul. 1990. "Water Resources: Shortage Amidst Abundance." (with), *TDRI Quarterly Review*.

## **CHAPTERS IN BOOKS AND CONFERENCE PROCEEDINGS**

Panayotou, T. 2001. "Environmental Management Systems and the Global Economy." In *Regulating from the Inside: Can Environmental Management Systems Achieve Policy Goals?* Washington DC: Resources for the Future (forthcoming).

Panayotou, T. 2000. "Environmental Sustainability and Services in Developing Global City Regions." In *Global City-Regions*, ed. Allen Scott. Oxford, UK: Oxford University Press (forthcoming). Previously published as Working Paper no. 55, Environment and Development Paper No.3, Center for International Development at Harvard University, Cambridge, MA.

Panayotou, T. 1999. "Globalization and Environment." In *Globalization with a Human Face, Background Papers, Vol. 1, Human Development Report 1999*, New York: United Nations Development Programme. Also published as Working Paper no. 53, July 2000. Environment and Development Paper No. 2, Center for International Development at Harvard University, Cambridge, MA.

Panayotou, T. 1999. "Population and Environment." In *Yearbook of Environmental Economics 2000/2001*, eds. T. Tietenberg and H. Folmer, Edward Elgar Publishing Co., Cheltenham, U.K. Also published as Working Paper no. 54, July 2000. Environment and Development Paper No.2, Center for International Development at Harvard University, Cambridge, MA.

Panayotou, T., T. Schatzki, and Q. Limvorapitak 1999. "Differential Industry Response to Formal and Informal Environmental Regulations in Newly Industrializing Economies: The Case of

Thailand." In *Indicators of Environmental Enforcement: Proceedings of a North American Dialogue*, Montreal: Commission for Environmental Cooperation.

Panayotou, T. 1998. "Estrategias económicas para la agricultura sustentable en la Pampa Argentina." In *Hacia una agricultura productiva y sostenible en la pampa*, Banco de la Nación Argentina, Buenos Aires.

Panayotou, T. 1998. "Six Questions of Design and Governance." In *Issues and Options: The Clean Development Mechanism*, José Goldemberg, ed., United Nations Development Programme.

Panayotou, T., L. Jinchang, and R. Yomg 1998. "Full-Cost Pricing of Timber in China." In *Natural Resource Pricing in China: Water Supply, Coal, and Timber*, Silver Spring, MD: MRM International Press for the Environmental Economics Working Group, China Council for International Cooperation on Environment and Development.

Panayotou, T. 1997. "Environment and Natural Resources." In *Emerging Asia: Changes and Challenges*, Asian Development Bank, Manila.

Panayotou, T. 1997. "The Role of the Private Sector in Sustainable Infrastructure Development." In Luis Gomez-Echeverri, volume ed., *Bridges to Sustainability: Business and Government Working Together for a Better Environment*. Yale University, New Haven, CT. (Number 101 in Bulletin Series Yale School of Forestry and Environmental Studies).

Panayotou, T. 1997. "Taking Stock of Trends in Sustainable Development Since Rio." In *Finance for Sustainable Development: The Road Ahead: Proceedings of the Fourth Group Meeting on Financial Issues of Agenda 21*, pp. 35-72, Santiago, Chile. United Nations, New York.

Panayotou, T. and S. Abdu. 1997. "Vietnam's Industrialization and Urban Environmental Challenge." In *Development Strategies for Vietnam: Challenges to Prosperity*. Prepared for the Ministry of Finance, Japan.

Panayotou, T. 1996. "An Inquiry into Population, Resources and Environment." In D.A. Alburg, A.C. Kelly, and K. Oppenheim Mason (eds.), *The Impact of Population Growth on Well-being in Developing Countries*. Springer-Verlag: Berlin/Heidleberg, pp. 259-298. Previously presented as Inquiry Background Paper No. 7, "Population Growth and the Environment" for the "Inquiry into the Links between Population and Development," March 1994, led by Dennis Ahlburg for the Fed. Govt. of Australia.

Panayotou, T. and N. Naqvi. 1996. "Case Study for Vietnam." *Structural Adjustment, the Environment, and Sustainable Development* (David Reed, ed.), 263-296, London: Earthscan Publications.

Panayotou, T. 1995. "Conservation of Biodiversity and Economic Development: The Concept of Transferable Development Rights." *Biodiversity Conservation*. (C.A. Perrings, K.-G. Mäler et al., eds.), 301-317, The Netherlands: Kluwer Academic Press.

Panayotou, T. 1995. "Environmental Degradation at Different Stages of Economic Development." *Beyond Rio: The Environmental Crisis and Sustainable Livelihoods in the Third World* (I.

Ahmed and K. Doeleman, eds.), MacMillan, Basingstoke. Reprinted St. Martin's Press, New York.

Panayotou, T. 1995. "Market-Based Instruments in Environmental Management: Experiences and Perspectives in Developing Countries." *Market-Based Instruments of Environmental Management in Developing Countries* (L. Hottler and S. Paulus, eds.), German Foundation for International Development, Berlin.

Panayotou, T. and P. Asthon. 1995. "Sustainable Use of Tropical Forests in Asia." *Biodiversity Conservation* (C. Perrings, K.G. Maler, et al., eds.), 257-77, Kluwer Academic Press, The Netherlands. also in *Ecological Economics*, Special Issue, 2nd Conference on "Ecology and Economics of Biodiversity Loss," Beijer Int. Inst. Eco. Econ.

Panayotou, T. 1994. "Economic Reforms, Environmental Protection, and Sustainable Development in Vietnam." *Economic Reform in Vietnam: In Search of the Dragon's Trail*. (D. Perkins, D. Dapice, and J. Haughton, eds.), Cambridge, MA: Harvard University Press.

Panayotou, T. 1994. "Incorporating Environmental Concerns in Forestry Planning." Presented to the CFS/FAO meeting on Forestry Sector Planning during SAF/CIF Convention; Anchorage, Alaska, Sept. 18-22.

Panayotou, T. 1994. "The Population, Environment, and Development Nexus." *Population and Development: Old Debates, New Conclusions* (R. Cassen, ed.), An Overseas Development Council "Policy Perspectives" volume, pp. 149-180, Transaction Publishers, New Brunswick.

Panayotou, T. and D. Glover. 1994 "Economic and Financial Incentives for Biodiversity Conservation and Development." Presented at the IUCN/ADB Regional Conference on Biodiversity Conservation, June 6-8; Asian Development Bank; Jan. 12.

Panayotou, T. and S. Sungsuwan. 1994. "An Econometric Analysis of the Causes of Tropical Deforestation: The Case of Northeast Thailand." Development Discussion Paper No. 284, 32 pp., Cambridge, MA: Harvard Institute for International Development, January 1989; also in *Causes of Tropical Deforestation*. (D. Pearce and K. Brown, eds.), 192-210, London: UCL Press.

Panayotou, T. and C. Zinnes. 1994. "Free-Lunch Economics for Industrial Ecologists." In R. Socolow, C. Andrews, F. Berkhout, and V. Thomas (eds.), *Industrial Ecology and Global Change*, Cambridge University Press, Cambridge, MA.

Panayotou, T. 1993. "Economic Incentives for Environmental Management in Developing Countries." *OECD Documents: Economic Instruments for Environmental Management in Developing Countries*. Proceedings of a Workshop held at OECD Headquarters, Paris; OECD, 23-29.

Panayotou, T. 1992. "The Asian Environmental Crisis: Comparative and Global Perspectives." In *Virginia Consortium for Asian Studies: Occasional Papers* (Elizabeth de G.R. Hansen and John Goulde, eds.), Vol. IX, 17-30, Arlington, VA: The Virginia Consortium for Asian Studies (VCAS).

Panayotou, T. 1992. "Population Change and Land Use in Developing Countries: The Case of Thailand." Presented at the Workshop on Population Change and Land Use in Developing Countries.

Washington, DC: Committee on Population, National Academy of Sciences, 5-6 December 1991. Abstracted in R. Engelman and S. Koontz, eds., *Population and the Environment: Impacts in the Developing World, No. 6*. Population Crisis Committee, Washington, D.C.

Panayotou, T. and C. Sussangkarn. 1992. "Structural Adjustment and the Environment: The Case of Thailand." In D. Reed, ed., *Structural Adjustment and the Environment*. Westview Press, Boulder.

Panayotou, T., M. Yacoubian, and M. Hirschland. 1992. "The Economics of Environmental Degradation: Problems, Causes, and Responses." In A. Markandya, et al., *A Reader in Environmental Economics*. Earthscan Publications, London.

Panayotou, T. 1991. "Environment and Development in Asia." In *Asian Development Outlook*, (211-271), Asian Development Bank, Manila.

Panayotou, T. 1991. "Status and Potential of Non-Timber Forest Products in the Sustainable Development of Tropical Forests." In *Sustainable Development of Tropical Forests*, Conference Proceedings, International Tropical Timber Organization, Yokohama.

Panayotou, T. 1990. "Economic Incentives in Environmental Management and Their Relevance to Developing Countries." In D. Eröcal, ed., *Environmental Management in Developing Countries*. Paris: Organisation of Economic Cooperation and Development (OECD): 83-132.

Panayotou, T. 1990. "Investing in Rural Industry for Employment and Balanced Growth: The Case of Thailand." In N. Nemetz, ed., *The Pacific Rim, Investment, Development and Trade*. pp. 156-194, University of British Columbia Press, Vancouver.

Panayotou, T. and P. Arambulo III. 1990. "Primates as Renewable Resources: the Economics of Conservation." In P. Arambulo III, F. Encarnación, J. Estupiñán, H. Sanamé, C.R. Watson, and R.E. Weller, eds., *Primates of the Americas: Strategies for Conservation and Sustained Use in Biomedical Research*. Proceedings of the First Ordinary Meeting of the Regional Primatology Committee for the Americas (CORP I), pp. 85-94, Pan American Health Organization, Seattle, WA.

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Panayotou, T. 1989. "The Economics of Man-made Natural Disasters: A Framework for Rehabilitation and Prevention." In NOC/NESDB/USAID, *Safeguarding the Future: Reforestation and Sustainable Development in the South of Thailand*. Bangkok.

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