

## Rutgers Supply Chain Environmental Management and Purchasing Program

- Greening the Supply Chain; Utilizing the Supply Chain as the Global Multi-Sector-wide Eco-Implementation Strategy
- Public and International Environmental Sustainable Development Policy
- Strategic Sourcing and Purchasing / Budgeting Analysis
- National/International Research
- Supply Chain Archeology-Zero Waste Management
- Applied Research (Rutgers, New Jersey, Global)
- Whole System Application and Integration

**Global/Local Outreach**  
 (Lectures, Presentations, Workshops, Conferences, Green Purchasing Cooperative)

**Greening the Supply Chain**  
 Comprehensive approach to Greening the Institution or Organization via the power of the Supply Chain Management System and the Contract Development and Execution Process, using all aspects of Global Supply Chains to foster multi-sector greening policy and applications; The Global Green Economy Shift

**Rutgers Teaching**  
 Rutgers Business School-SCM/GP-grad & undergrad  
 Ag Economics-SCM, MPA-Public Purchasing for Managers  
 SEBS-GP/Ind. Research

## Rutgers Green Purchasing Research Institute

### Research and Daily Activity

**Supply Chain Archeology (Waste)**  
 (Supply Chain Behavior and Consumption, Burlington County Landfill, Edgboro Landfill, Roadside Dumpsites, NYS, Oxford, England, Bogota, Colombia, Cusco, Peru)

**The Greening of Rutgers**  
 University Sustainability Committees, University-wide input-output greening integration

**Island School**  
 (Greening the Supply Chain, Waste Management and Recycling Systems, Plastics Extrusion Processing, Biodigestive Systems, Dump-to-Landfill, RU-IS Student Research, Marine Biology Research)

**Riverdale Country School**  
 (Whole System Environmental Audit, Input-Output System Analysis, Green Purchasing Cooperative Partnership)

**Oracle-ERP Systems**  
 Developing 'green' computer product tracking codes for eProcurement Systems, EEPPI System

**Greening New York City Transit Authority/MTA**  
 (Waste to Energy System, Alternative Fuel Contract)

**NAEP Sustainability Institute**  
 (Educating and Training Higher Education Procurement and Supply Chain Professionals)

**NJ State/Counties**  
 Somerset Co., Middlesex Co. (Green Gateway and Cooperative, Vo Tech Research and Educational Program, GEDZ, UEDZ)

**Corporate Supply Chain Research Projects**  
 (YourEncore, Unilever, M&M Mars, Wachovia, MetLife, Merrill Lynch, Bayer, Johnson & Johnson, etc.)

**Systems Thinking**  
 (Research, Approach and Philosophy)

**Life Cycle Assessment**  
 (LCA System Modeling, Product and Service LCA Decision-making Tools)

**Environmental Economics**  
 Life Cycle Costing  
 Total Cost of Ownership  
 Return on Investment, Financing, Leasing, Eco-Venture Capitalism

**Environmental Management and Policy**  
 (ISO 14001, Whole-System Analysis, Zero Waste Policy)

**Energy**  
 (Conservation, Traditional to Alternative Energy Systems - Economic Analysis, Cap-and-Trade, Bio-Waste-to-Energy Systems, Ag-Waste-to-Energy Systems)

**Communication in Design Research**  
 (Redevelopment of the Supply Chain Procurement Contracting Process with CSR Integration)

**Air Quality**  
 (Pollution Prevention Strategies, policy and corporate responsibility)

**Water and Water Quality**  
 (Consumer and Corporate Impacts on Water and Water Quality, Factory Discharge and Runoffs, Water Efficiency, Human Pharmaceutical Discharge)

**Packaging Engineering**  
 (No, Reduced and Alternative Packaging Schemes and Materials), Center for Sustainable Materials, etc.

**Green Buildings**  
 (Building EcoSystem Impacts, US Green Building Schemes, Internal Design, Furniture, Renovations)

**Supply Chain Archeology**  
 (Raw Material Extraction, Development, Packaging, Use and Disposal the Social, Behavioral, Environmental and Economic Impacts of Consumption and Waste)

**Transportation**  
 (Fleet Management & Maintenance, Alternative Fuels, Global Logistics, Airline, Rail, Bus), "Buy Local"

**Corporate Social and Environmental Responsibility Reporting**  
 (Sarbanes Oxley and Environmental Report)

**Waste and Waste Management**  
 (Prevention, ReUse, Traditional Disposal-Bioreactive Landfills Biodigestive Systems, Waste-is-Food/Feedstock)

**Greening Healthcare and Pharmaceuticals**  
 (Pharm/med waste in waste/water streams, green production, products and packaging, cleaning chemicals, etc.)

**Manufacturing Processes**  
 (Waste-is-Food/Feedstock, DfE, Water and Energy Conservation, EPR, minimizing toxic materials)

**Recycling**  
 (Multi-source to single stream/source, Market Development, Design for the Future, Extended Product Responsibility)

**EcoTourism**  
 (North/South America, Europe, Asia, projects in Costa Rica, Colombia, Brazil, Trinidad-Tobago)

**Land**  
 Land Use and Quality, Renewable Resources, Crop Control for Food and Industry, etc.

**Greening IT and Telecommunication Systems**  
 EPEAT, EPR, DfE, Energy Conservation Programs, minimizing toxic materials in manufacturing, etc.

**Supply Chain to Climate and Greenhouse Gas Impacts - Eco-Labeling**

**Greening Hospitality Industry**  
 (Global Hotel and Travel Industry)

**Supplier Performance Based Contracting**  
 Green Cleaning, Trash & Recycling Services, PC/Laptop Purchasing Program, Campus Bus System, Office Supplies, etc.

**Additional Research Projects:**  
 Minority Environmental Leadership  
 Local Social and Environmental Justice  
 Local Procurement  
 New Product Development  
 Elijah's Promise  
 The Frog and Peach  
 "Greenwashing" Evaluation

**Chemicals**  
 (Integrated Pest Mgt, Cleaning Chemicals, Scientific Chemicals, All Product Chemicals and Chemical Alternatives, Hazardous Waste, Pharmaceutical Waste)

**University of Trinidad Tobago (UTT)**  
 (eProcurement, Greening the Caribbean Supply Chain, eWaste Management and System Development, New Green Campus \$1.5 Billion Developmental Project)

**Rainforest Research**  
 (Raw Material Extraction Research, Leticia, Colombia, Brazil, Costa Rica, Wood, Coffee, Rubber, Sugar Cane Research, Alternative Employment and Skill Development)

**San Andreas Island Project Colombia**  
 (Greening Hospitality, Green Supply Chain Systems, Island Waste Management Systems, Whole Waste Digestive Systems)

**Procure-to-Greenhouse Gas-Carbon Footprint Calculator**  
 (EcoFootprinting)

**Rutgers Energy Institute (REI)**  
 Student Research in energy conservation, energy policy, energy production, etc.

**UNICEF**  
 Global Child Welfare and Education, Child Labor, Water Quality, Equity

**Greening Sandy Hook, NJ**  
 (National Park Service, Sandy Hook Foundation, BioDiesel, Wind, Solar)

**RecycleMania**  
 Student, Faculty and Staff involvement and participation in campus recycling and waste reduction (Zero Waste/ Low Carbs, Battle of the Office Bulge, Dorm Competitions, etc.)

**Green the Rutgers University President's Residence**

Green purchasing is about considering the environmental impact of materials and services when making purchasing decisions. The principles of green purchasing are based on those of the waste hierarchy:

- Prevention** - do you need to buy the product or is there an alternative such as leasing?
- Reduce** - better planning will mean that excessive materials are not purchased and wasted.
- Reuse** - can reused materials be sourced to do the job such as second hand timber?
- Recycle** - purchasing products with recycled content develops markets for the materials we recycle from our homes and businesses.