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# Forestry Research and Education in South Korea

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# Forestry in Korea

- Forest land area in S. Korea: 6.4 million ha (N. Korea: 7–8 million ha)
- Deforestation due to land use change
- Growing stock in S Korea increases due to saving policy and age distribution biased toward young stands
- Wood & fiber demand met with imported timber & pulp and paper products

# Forestry in Korea

- Demand for forest services such as watershed protection and recreation increases, esp. from forests near population centers
- Demand for organic foods grown in forests increases due to increased risk of contamination of agricultural foods produced with high inputs of chemicals
- Voices of civil societies for nature conservation and against destruction of ecosystems
- Protected areas increasing

# Forestry Research in South Korea

- R&D in forest sector is increasing:
  - 56 million USD (2007) – Korea Forest Service
  - 68 million USD (2008) – Korea Forest Service
- Korea Forest Service and Ministry of Education, Science & Technology are major sources of funding for forestry research
- Korea Forest Research Institute and universities are major players in forestry R&D, with a small contribution from private sector

# Issues in Korean forestry research

- Improvement of forestry productivity in response to international trade policy changes
- Ecosystem health - damages by insects
- Prevention of calamities in forested communities (wildfires, slides, floods)
- Meeting increasing demand for carbon sequestration, watershed protection & recreation services of forests
- Governance of protected areas and livelihood of forest-dependent communities

# Forestry R&D Strategy

- Networking of researchers in forestry
- More incentives for private sector to invest in forestry research
- Increase of R&D budget up to 6% of forestry budget (Korea Forest Service)
- More investment in research on forest ecosystem services and infrastructure for resource management
- Continued research on forest ecosystem health and resource productivity & utilization

# Forestry Education in South Korea

- Modern forestry education started in 1906 at Suwon Agriculture & Forestry School.
- University forest education started in 1946 at Seoul National University.
- 20 universities offer forestry education curricula while three vocational schools for forestry technicians.
- Forestry graduates compete for jobs with graduates of landscape architecture in urban ecological management fields.

# Issues in S. Korean University Forestry Education

- Unbalance in demand and supply of graduates with forestry degree
  - Too many forestry schools & graduates
  - Decreasing demand for forestry graduates
- Curricula is biased toward theory with limited practicum.
  - Most of professors and instructors are not trained with field experiences.
  - Lack of exchange of jobs between university faculty and the field(public & private).
- Field internships are not common.
- Size of forestry faculty and enrollment is too small to cover the overall aspects of forestry.

# Forestry Research and Education at Seoul National University

- 20 faculty members and 114 graduate students
- Member of IUFRO (The President's institution)
- M o U for co-operation in Ed & Re with;
  - Tokyo University (Japan)
  - Hokkaido University(Japan)
  - University of Philippines at Los Banos
  - BPI(Bogor Agriculture University, Indonesia)
  - Beijing Forestry University (China)
  - University of Washington (USA)
  - University of Helsinki (Finland)
  - Centre for International Forestry Research

# Forest Sciences Courses at SNU

- *Forest environmental science major*
  - 13 faculty members
  - One curriculum for B.S.
  - One curriculum for M.S. and PhD
- Field practicum course compulsory
- Each curriculum requires thesis.
- *Environmental material science major*
  - 7 faculty members
  - One curriculum for B.S.
  - One curriculum for M.S. and PhD
- Each curriculum requires thesis.

# Records of SNU Forest Education

- *Forest environmental science major*
- Root back to 1906
- University level program started in 1946
- 1,018 graduates BS
- 320 graduates MS
- 162 graduates PhD
- *Environmental material science major*
- Branched out from forestry program in 1970
- 848 graduates BS
- 185 graduates MS
- 63 graduates PhD

# Forestry Research and Education at Seoul National University

- All graduate courses taught in English
  - if international students are enrolled.
- 15 international graduate students studying at Dept of Forest Sciences
  - Mongolia, Myanmar, Cambodia, Laos, Thailand, Vietnam, Indonesia, & Philippines.
- New Research & Educational programs in development
  - *Environmental Management* jointly with Business School
  - *Urban Ecology* jointly with Department of Landscape Architecture
  - Asian Institute for Energy, Environment & Sustainable Development

# Forestry Research and Education at Seoul National University

- Focus in research:
  - Mitigation via forestry and adaptation to climate change
  - Urban forest management
  - Ecological hazard management
  - Ecological restoration in deforested areas
  - Wood-composite and paper technology
  - Biomass utilization technology
  - International forestry (comparative studies)