Contents

• Study background and Scope of ES covered
• Biophysical ES assessment
• Social ES assessment and comprehensive assessment
• Conclusion

Study background

• Forest in urban area is decreasing by development activities in Japan
• Rural plantation forest is facing under management issues in Japan
• So the declining of forest ESs are serious issues in Japan.
Scope of Ecosystem Services (ESs) covered

- 14/15 ESs by Millennium Ecosystem Assessment (MA) (2005) and species/habitat

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Rural forest in Toyota City

Satoyama and plantation
Agricultural area: 14%,
Forest area: 43%
Upstream of Yahagi river

Biophysical ES provisioning assessment

- Especially Regulating and supporting services -

- ES provisioning potential modeling analysis (BGC-ES)
  - Understanding spatial structure
  - For questionnaire
Biodiversity potential mapping

Species Status
- Bear CR Critically Endangered
- Goshawk NT Near Threatened
- Deer LC Least Concern

Economical
Ecological

Legend:
- Habitat suitability
  - 0 – 0.2
  - 0.2 – 0.4
  - 0.4 – 0.6
  - 0.6 – 0.8
  - 0.8 – 1

Source: Red Data Book Aichi, 2009

Nagoya City
Over 2 million in population

Higashiyama and Heiwa Parks

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Social ES assessment and Comprehensive assessment

- Cultural service: subjective assessment based on several questionnaire surveys
- Weight of ES

Urban forest in Nagoya City:
- 1) web-based survey on 28 urban forest: 1400 samples for citizen
- 2) Survey focus on Higashiyama and Heiwa parks: around 3500 samples for citizen

Rural forest in Toyota City:
- 1) Face-to-face simple questionnaire
- 2) Web-based questionnaire
- 3) Drop off and pick up method

Spatial distribution of provision of ES and its beneficiaries
Conclusion

- Spatial benefit distribution: different by type of ESs
- Main factors of ES value: knowledge, benefit, nature preference, distance (spatial location)
- Importance of type of ESs: different by urban forest (Nagoya) and rural forest (Toyota)
- Priority of ESs: regulating ES high, provisioning ES low in this case
- Matching the provisioning area and demand for ecosystem service management policy

Reference

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