

More on LUMENS

Dewi S, Ekadinata A, Indarto D, Nugraha A, van Noordwijk M. 2014. *Planning land uses for multiple environmental services: the example of Merangin, Indonesia*. ETFRN News.

Dewi S, Ekadinata A, Indarto D, Nugraha A, van Noordwijk M. 2014. Negotiation support tools to enhance multi-functioning landscapes. In: Minang P, et al (eds). *Climate-Smart Landscapes: Multifunctionality in Practice*. Nairobi, Kenya: World Agroforestry Centre.

For more information about LUMENS

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Land use planning process is an ideal approach to govern a multifunctional landscape. In developing countries, land use planning is often conducted as a top-down process and not well-founded by sound understanding of ecological as well as socio-economic process, current situation and not anticipative towards changes of drivers in the future. Even when the policy and institutional is available, the technical capacity is still limited, partly because available tools are too complex to operate, output that are quite rigid and hard to interpret, no intermediate output can be extracted which can help the scenario development or can't be designed to accommodate scenarios.



A negotiation support tool and method to reach commonly desired multifunctioning landscape

www.lumens.id

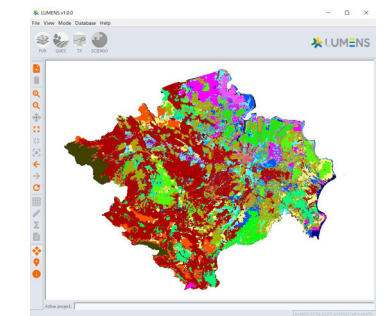
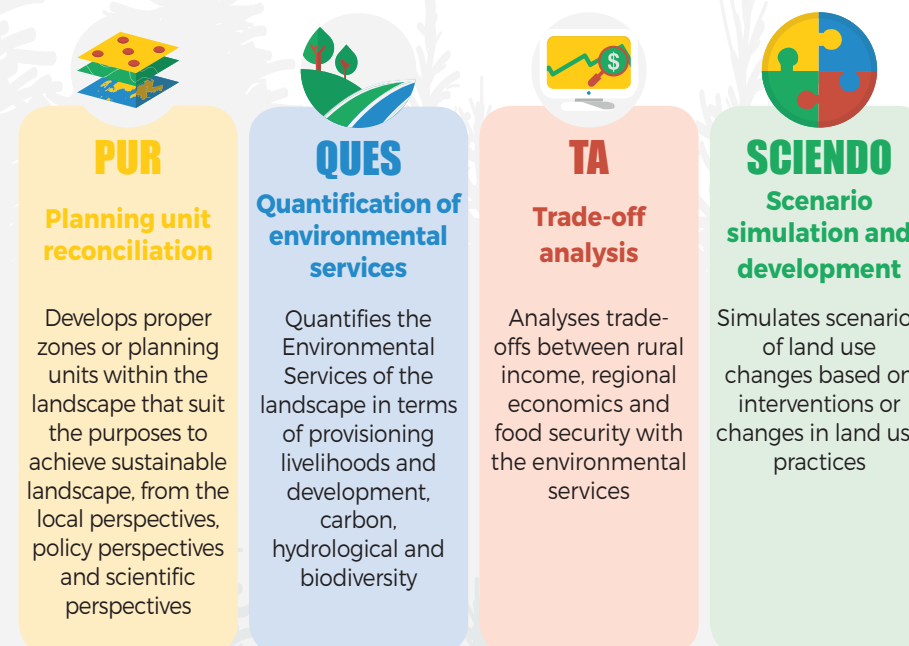
APPROACHES

- Build common vision and understand among working groups of multiple stakeholders
- Collect and compile best available relevant dataset: land admin, plans, land use/cover maps, biophysical, demographic, socio-economics
- Strengthen capacities in quantifying ecosystem functions, analyzing trade off between conservation-development, developing options and simulating scenarios, negotiating best scenarios over ex-ante impact analysis and implementation, monitoring and evaluation within the existing policy framework
- Facilitate and negotiate public consultations and high level discussions to mainstream plans into programs of local government and identify other potential financing mechanisms
- Align and engage with policy process at the local and national levels

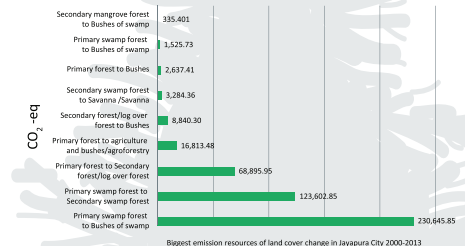


SOFTWARE

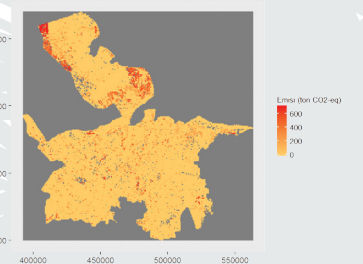
LUMENS is accompanied with user-friendly, parsimonious and publicly available software to



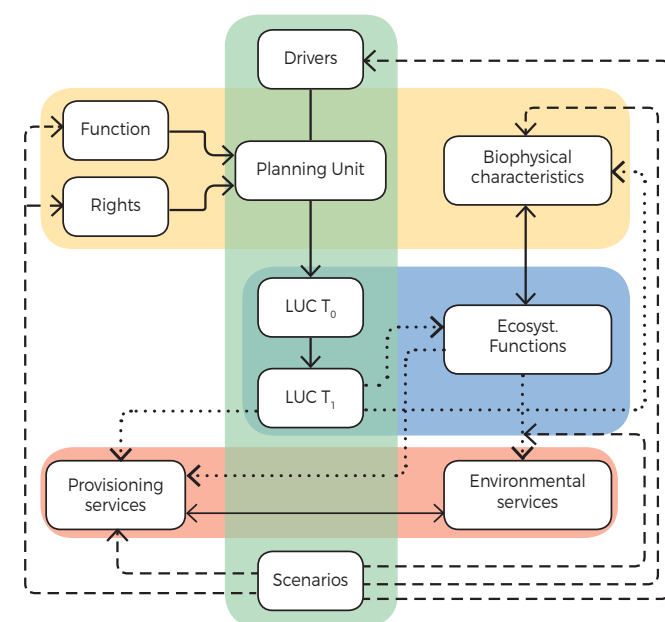
The largest source of emissions based on land cover change in Banyuasin 2010-2014 (CO₂-eq)



Map of Carbon emission in Banyuasin 2010-2014



TECHNICAL PROCESS



- Land Use/cover change model and scenario simulation (SCIENDO)
- Reconciliation of Planning units (PUR)
- Quantification of Biodiversity, Ecosystem Functions and Services (QuES)
- Trade-off analysis between Biodiversity, non-provisioning ES and provisioning ES (TA)
- Actual dynamics/changes
- Impacts/consequences/feedback
- Scenario development

- Develop planning unit
- Driver analysis and historical land use and land cover changes with respect to planning unit.
- Quantify of biodiversity and environmental services
- Develop baseline scenario of future land use and projection of environmental services;
- Develop scenarios that are intended to change the business-as-usual (BAU) trajectory
- Project future LULCC through spatially explicit modelling
- Conduct trade-off analysis from the multiple scenarios between environmental services
- Formulate action plans, including necessary instruments to implement the agreed scenario.

KEY ACHIEVEMENTS

- Development of low carbon development strategies in 5 provinces and 15 district across Indonesia, through European Union and DANIDA's supports
- Revision process of Provincial Action Plan for Green House Gas Emission Reduction in 34 Provinces Across Indonesia through endorsement of Bappenas
- Development of Green Growth Masterplan in South Sumatra with support from IDH
- Landscape restoration potential assessment in Musi and Batanghari Watershed, Indonesia



41

Capacity strengthening process including training and facilitation for land use planning across 15 districts and 5 provinces

984

Local planners, CSO, and academician trained in inclusive, integrative and informed land use planning process, over 40% are women

34

First draft of provincial level low emission development plan as part of Provincial Action Plan for Climate Change Mitigation has been produced