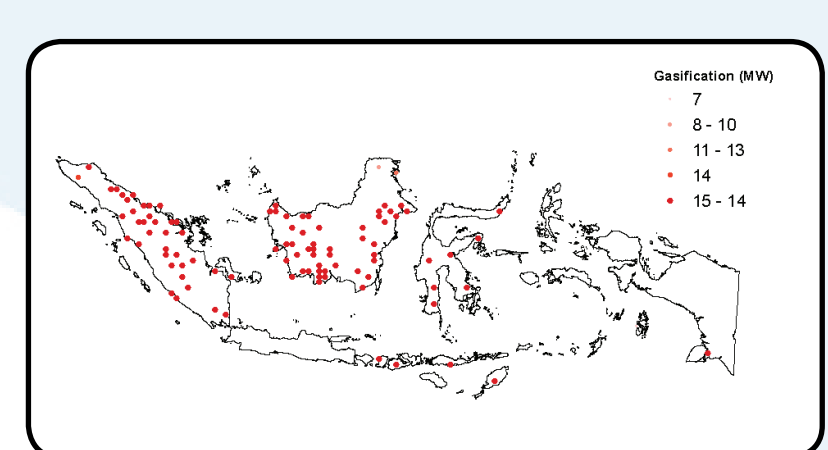


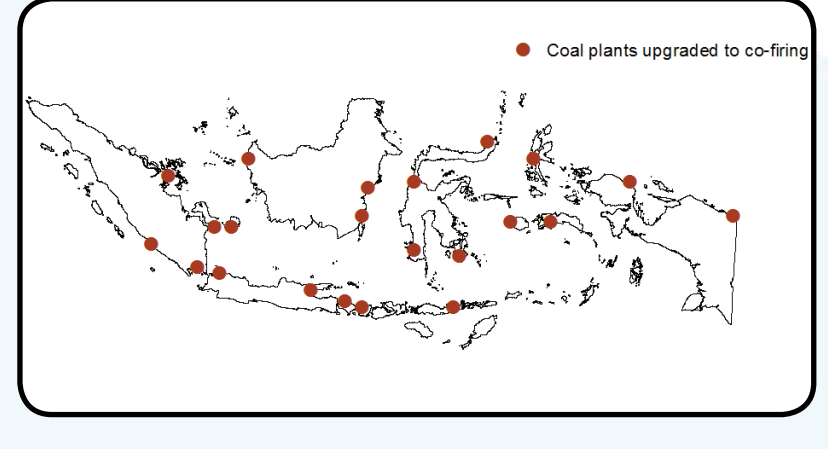
### Scenarios and examples of results

Scenario number	Demand <sup>1</sup>	Target <sup>2</sup>	Biomass share <sup>3</sup>	Primitive forest <sup>4</sup>
1	Historic	Free	100%	Yes
2	Java	Free	100%	Yes
3	Historic	23%	100%	Yes
4	Java	23%	100%	Yes
5	Historic	Free	20%	No
6	Java	Free	20%	No
7	Historic	23%	20%	No
8	Java	23%	20%	No

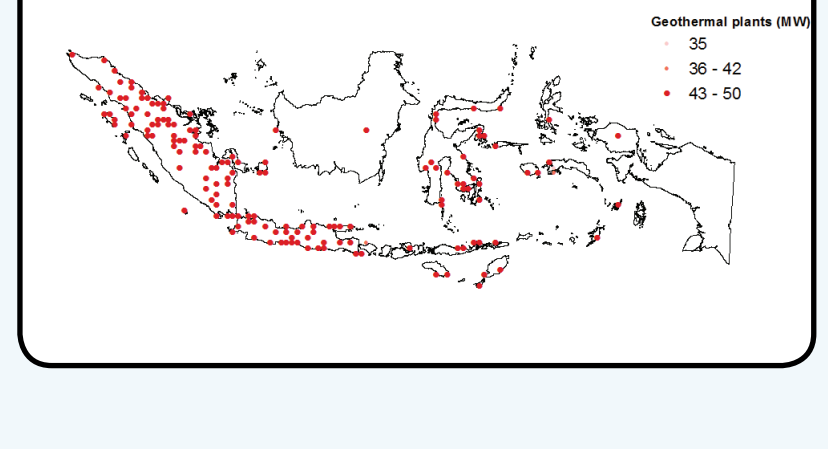
### Optimal plant locations



Gasification production plants based on forest residues (share of 20%) from non primitive forest.



Selection of coal plants to be upgraded into co-firing. A 5% co-firing is assumed. No primitive forest used.



Locations of geothermal plants.

### Conclusion

- A free target scenario would lead to a 15% renewable energy share under a business as usual for the costs.
- A 23% target scenario would be reached with substantial increase of fossil fuel cost, or implementation of a carbon tax, or subsidies. However, significant contribution of natural gas is still seen to meet demand in areas that have low access to modern energy services.
- Not using the primitive forest would lower the bioenergy potential by a maximum of 4%.

### On-going Work

The model will be developed towards a full energy system (wind mills, solar PV plants, hydro power stations and gas power plants). The project will deliver policy recommendations on the optimal renewable energy mix for each province under given scenarios.