Aquaculture Social Carrying Capacity and not Exceeding it: How can Economic Models Help?

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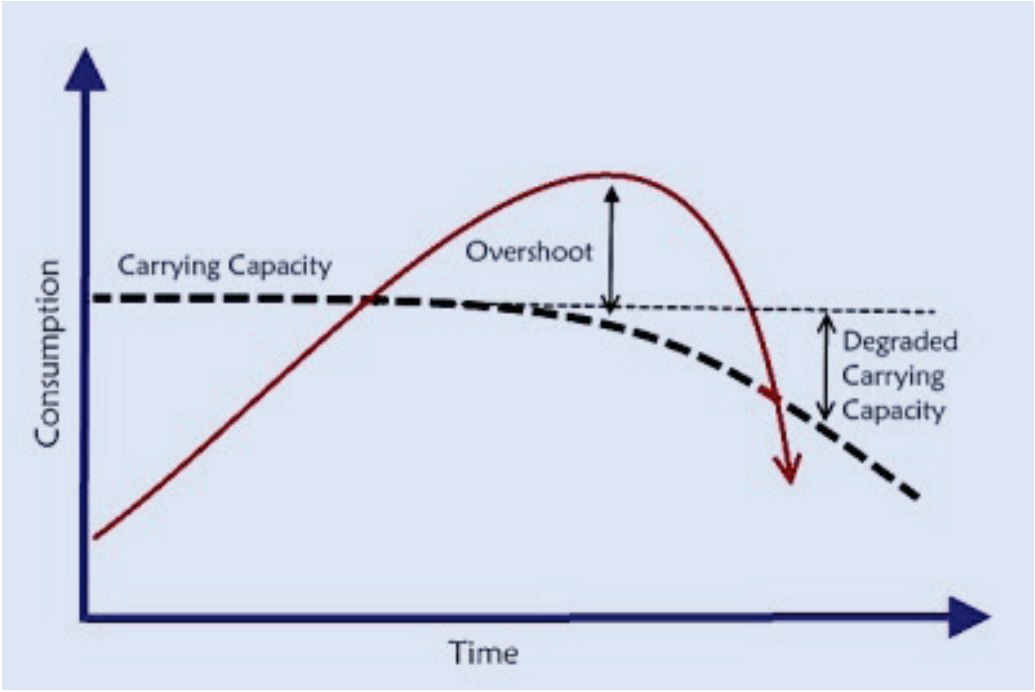
How much fish production is too much?

Aquaculture carrying capacity

- Physical CC
- Production CC
- Ecological CC
- Social CC



Social carrying capacity

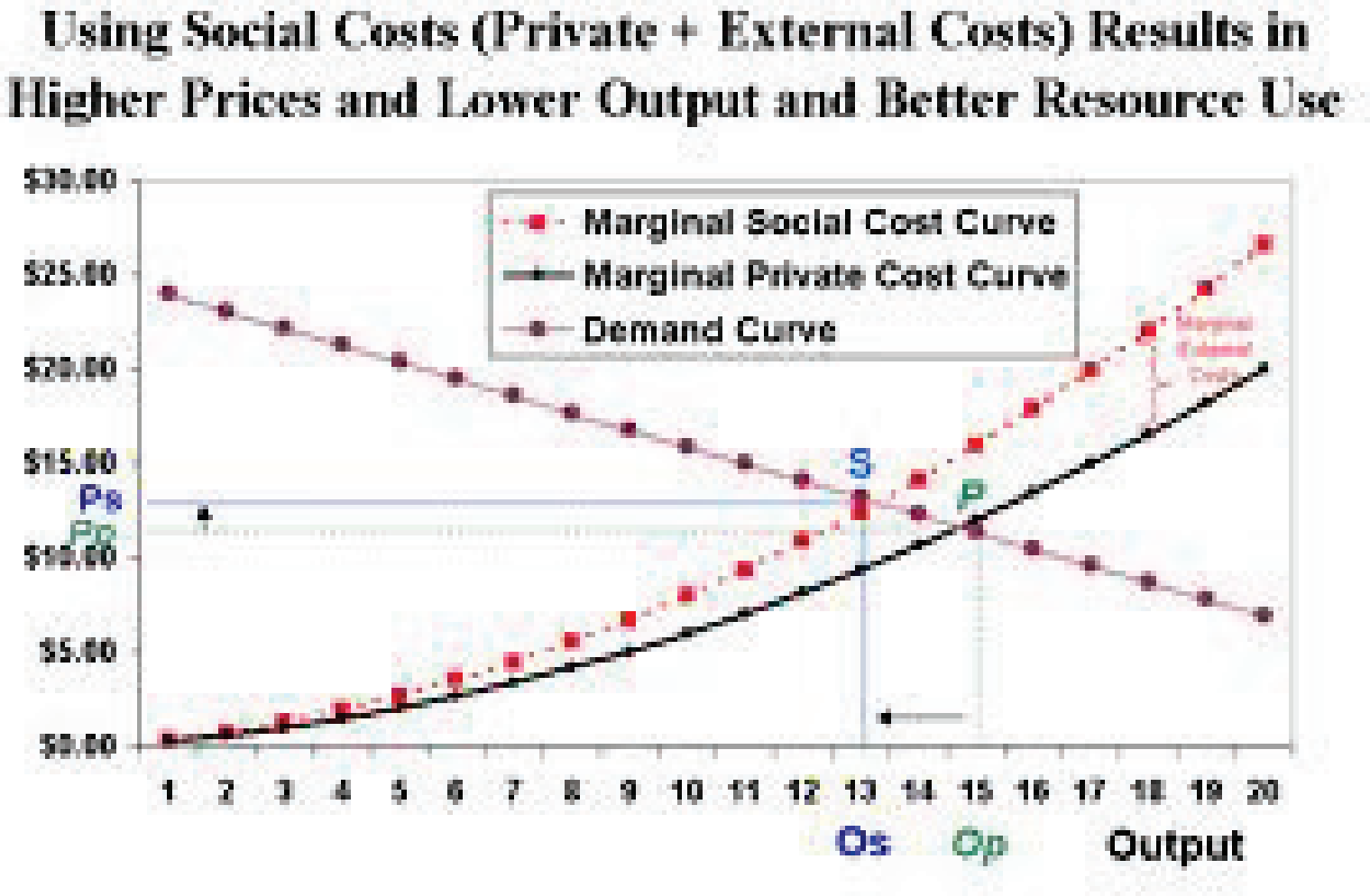
- Maximum aquaculture production that does not cause unacceptable impacts to the social system
- Usually considered at the ecosystem and community scale
- Who decides what is unacceptable?

Social Carrying Capacity Manifested a Bit Differently in SE-Asia

Concept of Social Costs

- Business activities on public lands or in public waters accrue direct benefits to the business
- However, costs of pollution or other "externalities" borne by public
- Entire field of Environmental Economics devoted to quantification and modeling of social costs
- Quantification & modeling of social costs allows for developing offsets

Example of Modeling Social Costs



Examples of Economic Offsets

- Cap & auction of permits
  - Require good model of carrying capacity to cap
  - Capture some of private profit back to public
  - Allow for greater public investment in monitoring or mitigation (e.g. Sual, Pangasinan, Philippines)
- Cap & trade of pollution rights
  - Require good modeling of pollution potential of all aspects of IMTA
  - Conceptually dirtier elements, e.g. net pens pay shellfish or seaweed producers to produce offsets

Offsetting Social Costs is Often a Good Thing!

Thank You – Salamat – Terima Kasih