Sindicatum carbon capital

Creating permanent forestry credits

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Forests are dynamic ecosystems & a permanent carbon pool

- 60% of terrestrial carbon is stored in forests, this is equiv. to 50% of all accessible fossil coal reserves (585 Gt)
- Emissions from deforestation are permanent, destruction of native forest sinks is irreversible
- 1.5 m ha where lost due to deforestation in last three years

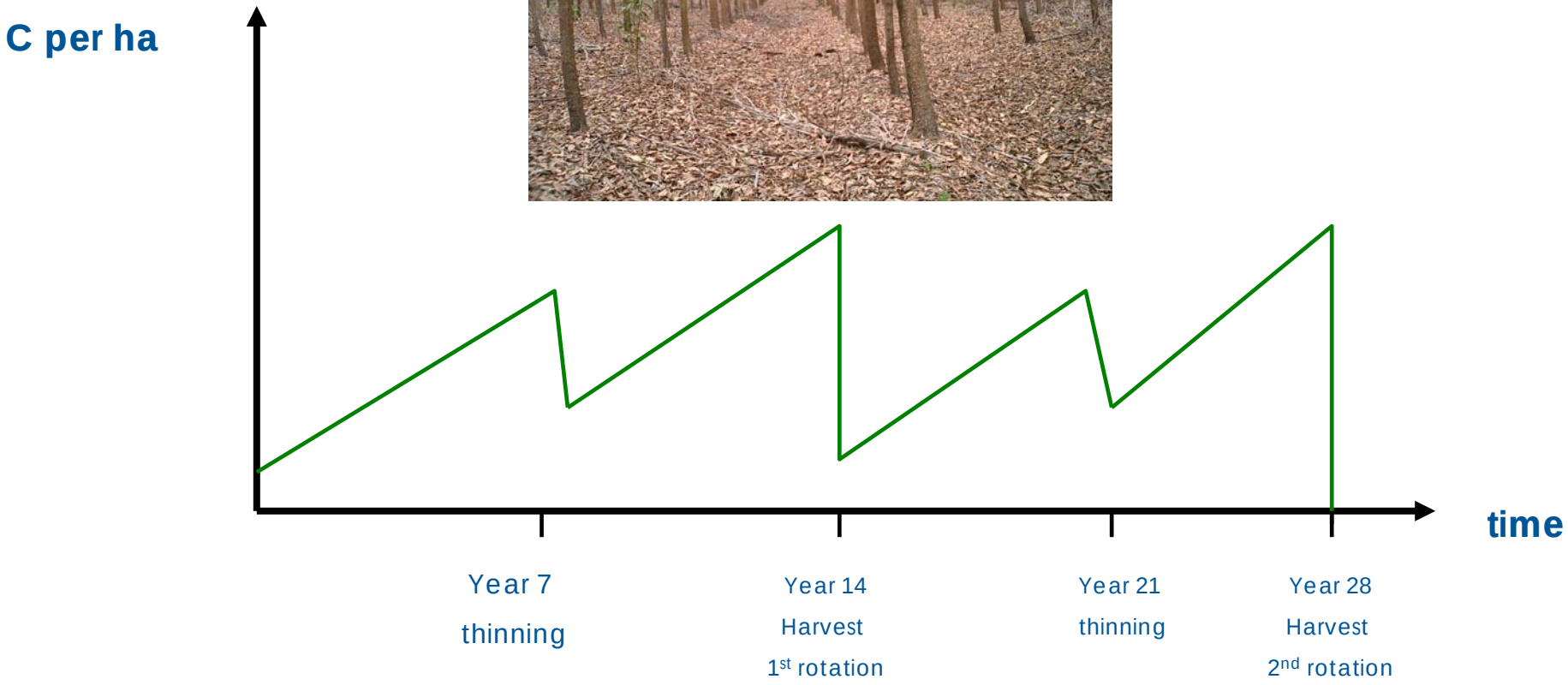
Getting the tools right

- **Incentive based mechanisms** are most effective to change customs/ priorities of countries at different stages of development
- **Forest protection needs to be profitable**
  a. At local level – communities need to be compensated
  b. At national level – competition between ministries
  c. At global level – forest investments pay back in next generations
- **Environmental integrity is key**
  a. National inventories are needed
  b. Proper MRV

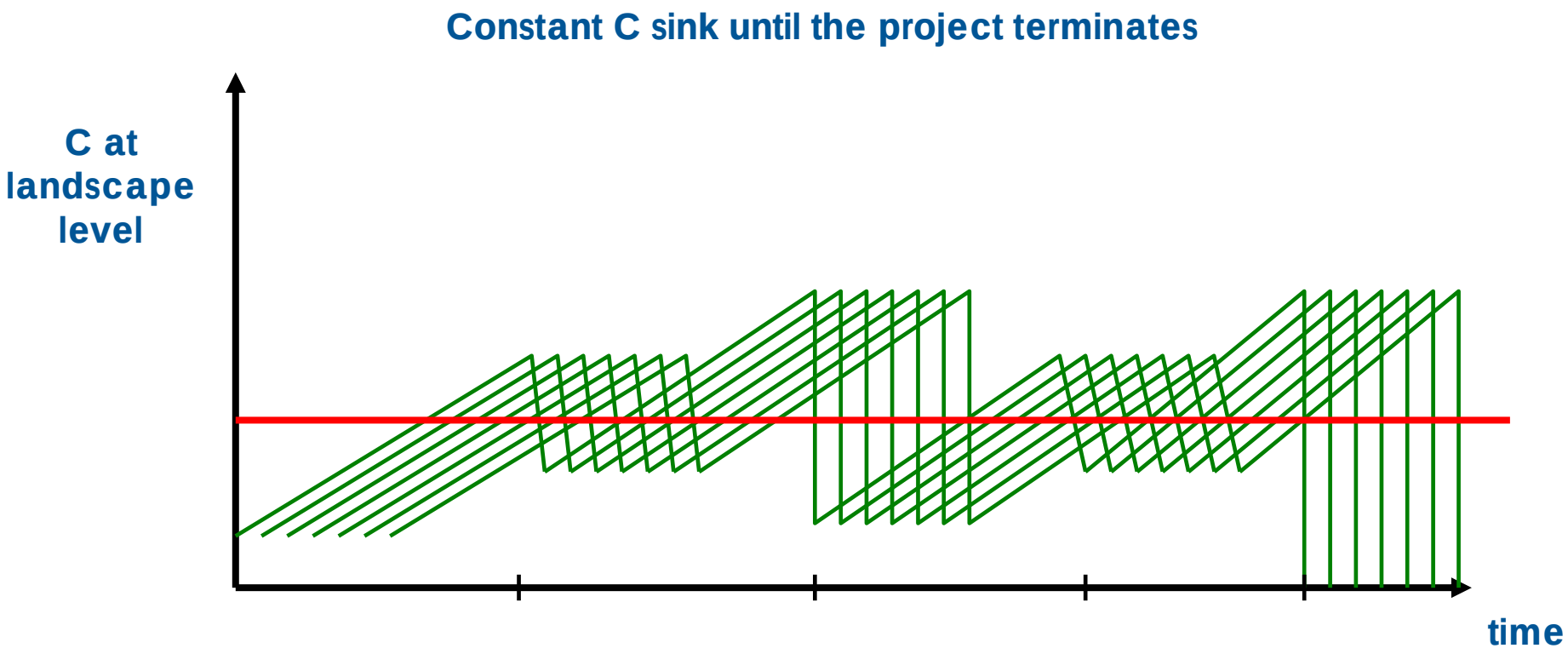
Forestry credits need to be fungible

- Creating **permanent compliance LULUCF & REDD credits** is key to
  a. get the forestry sector into the global carbon market
  b. For intersectoral trading
- VER schemes provide good examples of how permanence can be assured
- **Carbon sink versus Carbon emissions:** Two approaches to permanence of forestry credits
  a. Afforestation/ Refrorestation (A/R)
  b. Reduced Emissions from Degradation and Deforestation (REDD)

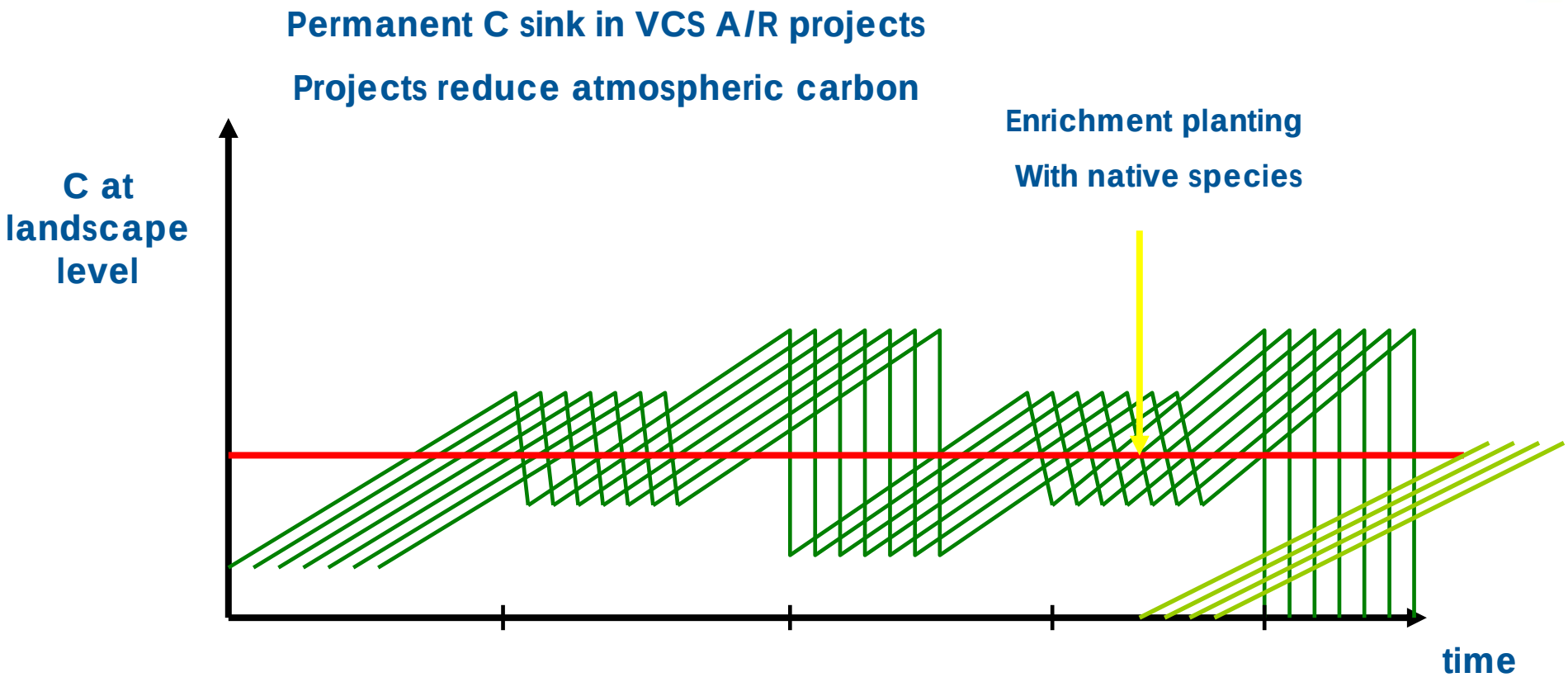
Carbon Sequestration in commercial A/R projects



Carbon Sequestration in commercial A/R projects



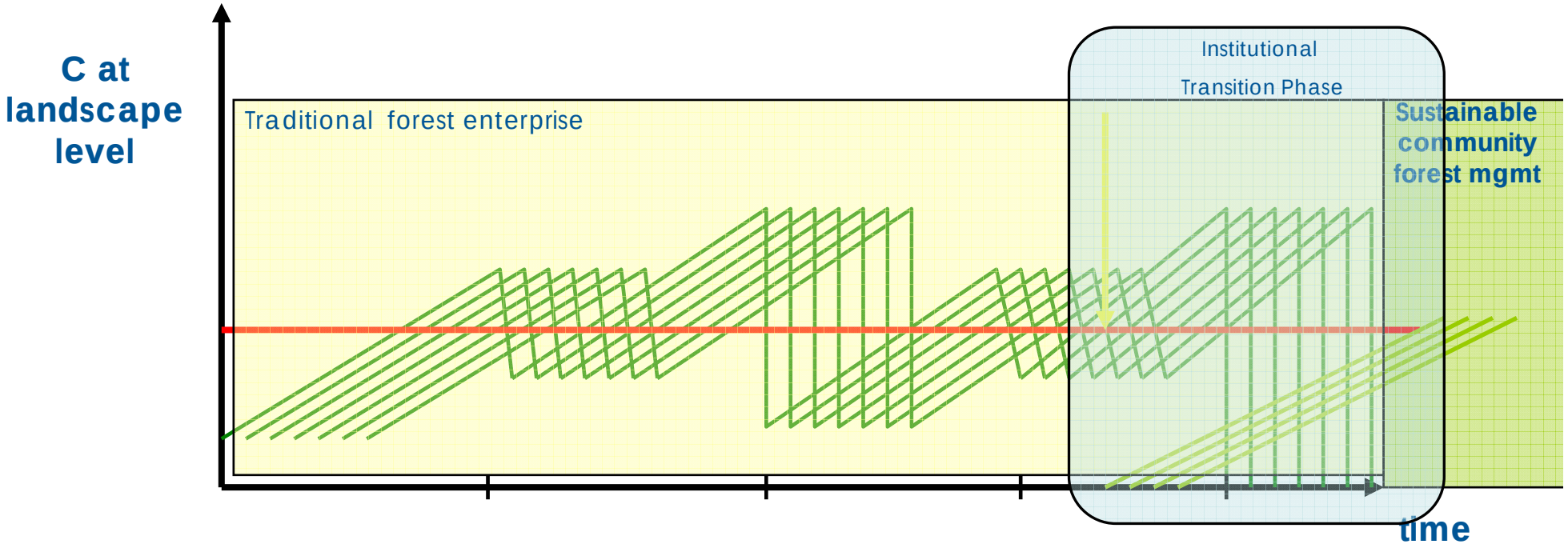
Carbon Sequestration in VCS A/R project



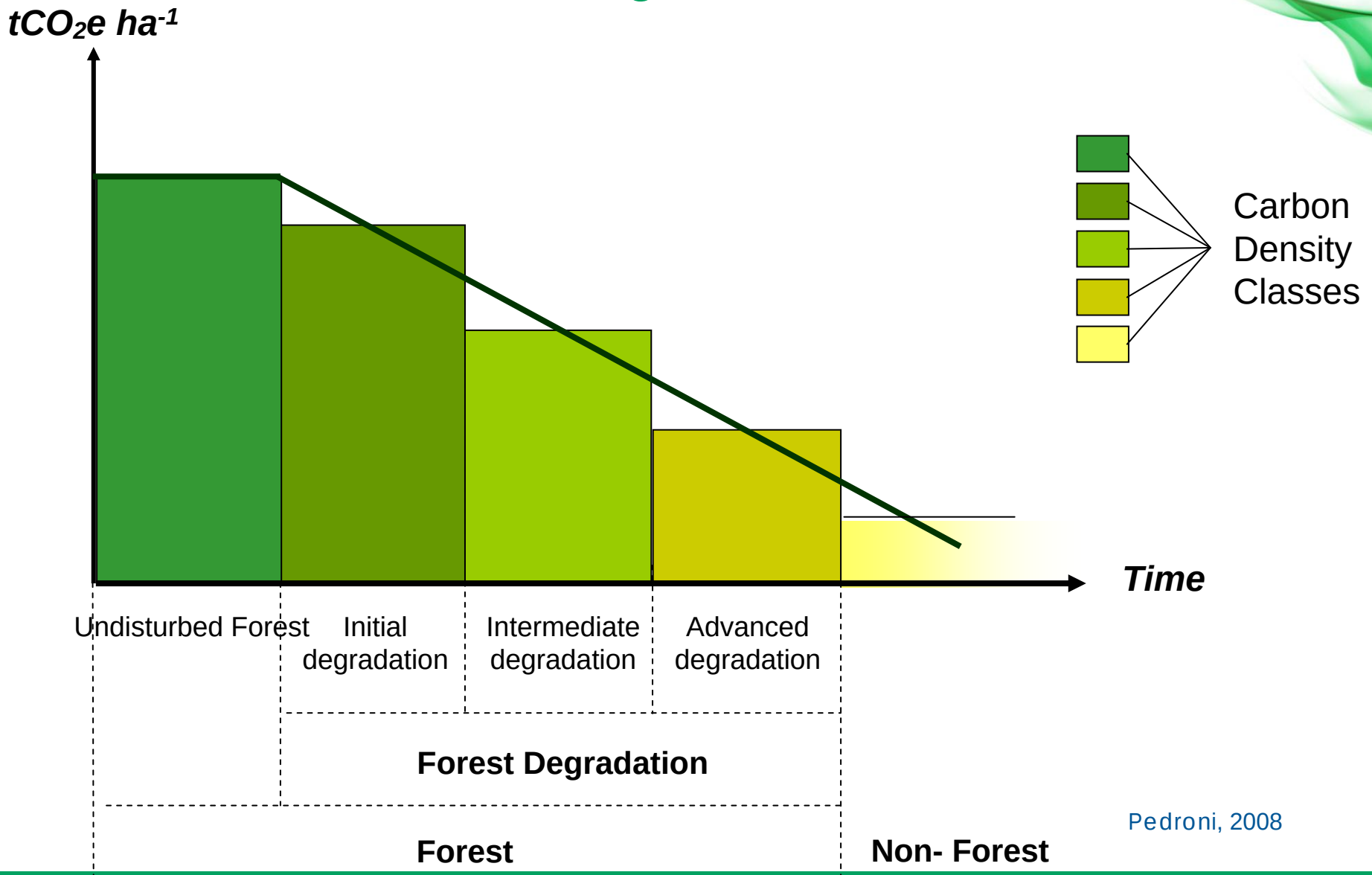
Carbon Sequestration in VCS A/R project

Permanent C sink in VCS A/R projects

Projects reduce atmospheric carbon

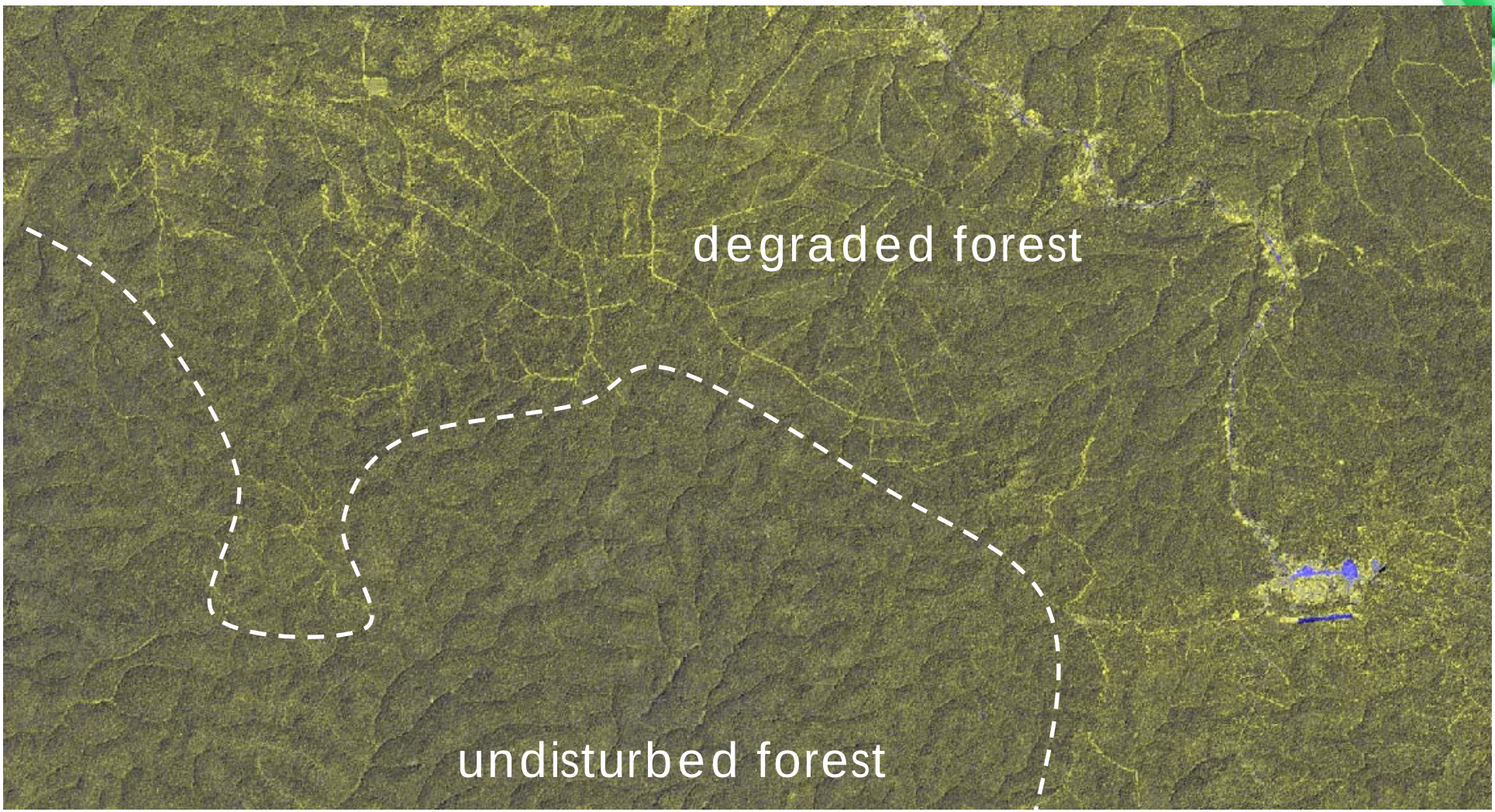


Emissions from Degradation & Deforestation



Pedroni, 2008

Degradation in a LANDSAT-scene



Risk Factors

- Identify key risks
  a. Quality management (pest, disease, fire)
  b. Financial security
  c. Legal entitlement (ownership of land/ wood/ carbon)
  d. Environmental (fire, pest, disease)
  e. Social (population growth, poverty)
  f. Political (competing resources e.g. oil, minerals, infrastructure)

Risk Management

Afforestation/ Reforestation Projects

- Non-permanence risk can be managed at project level
- Project takes liability

Avoided Emissions from Deforestation & Degradation

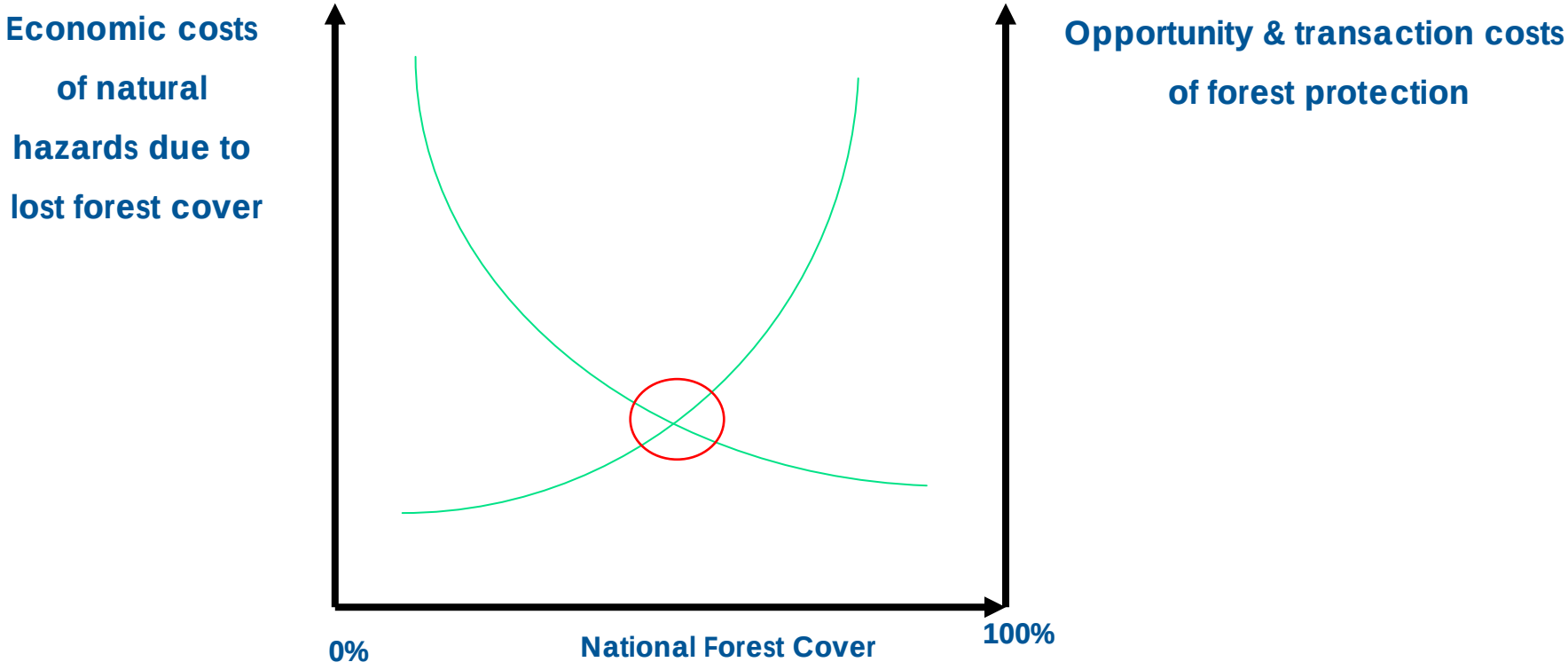
- Risks need to be managed where they arise, at
  a. Project
  b. national
  c. international level
- Liabilities need to be shared between levels

Combined effort between public & private sector for REDD

- **Projects:**
  a. Facilitate distribution of land titles/ use rights
  b. Gain experience & add to data collection
  c. Create local markets for non timber forest products/ sustainable fire wood
  d. Capacity building in communities and local administrations
  e. Start now, if market certainty post 2012 can be provided
- **National Governments:**
  a. Build up capacities & support infrastructure in administrations
  b. Land use planning at regional and national level
  c. Forest protection policies & enforcement
- **International Goverments**
  a. Provide finance
  b. Apply similar standards & measures internationally

Land use equilibrium – towards an optimal forest cover

- Countries need to identify their optimal forest cover
- Land use planning at national level needed
- Public funds for capacity building



Monitoring/ Reporting/Verification

- National forest inventory is needed but takes time to be built up
- Monitoring methodologies are rapidly evolving and ready for early action
- Technology is rapidly evolving and ready for early action
  a. Optical remote sensors
  b. Radar remote sensors
  c. Laser remote sensors
  d. Ground trouthing

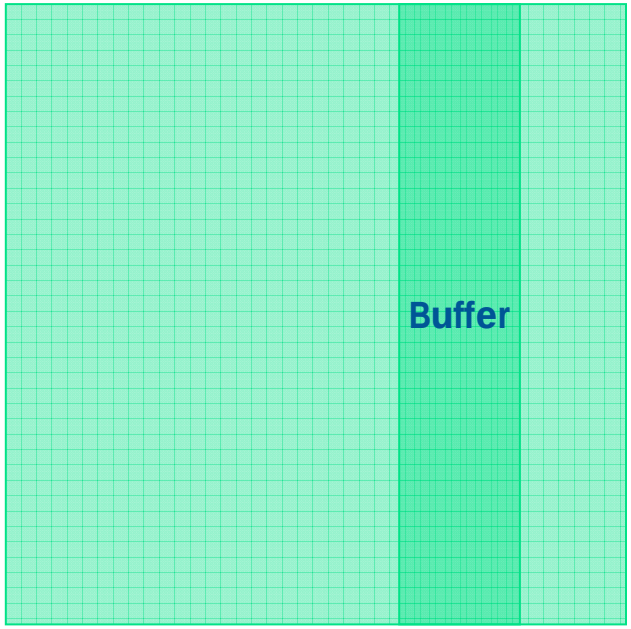
Permanence can be assured through

- Conservative calculations
- Carbon buffers

Commercial insurance products are not yet the right tool in developing country context.

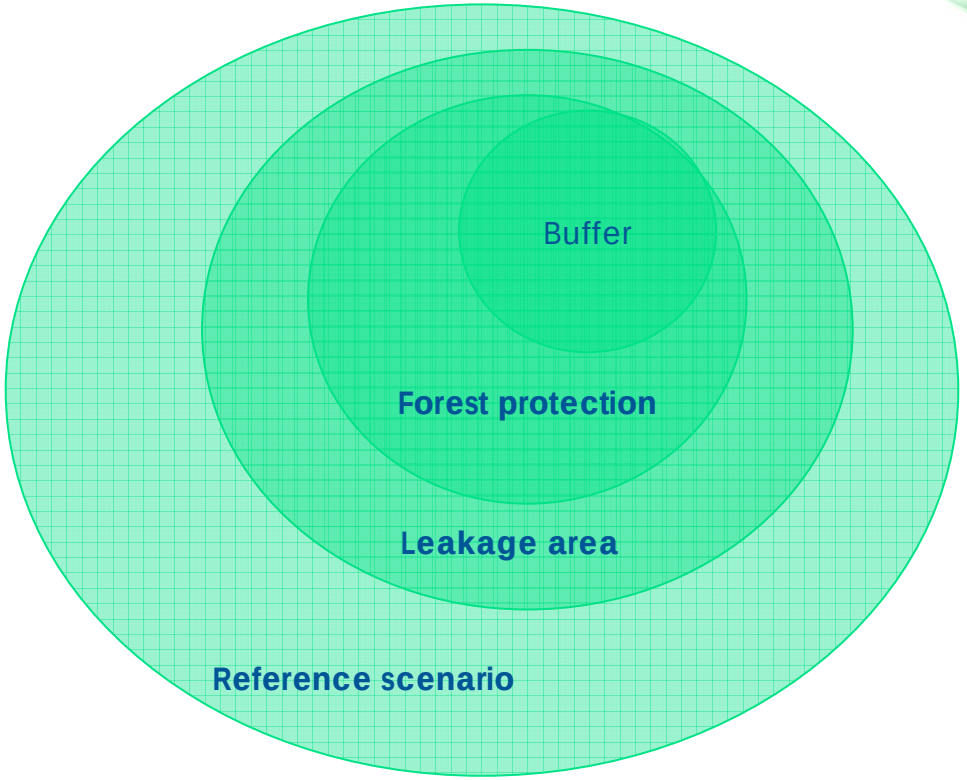
Risk identification & ranking at project level

A/R



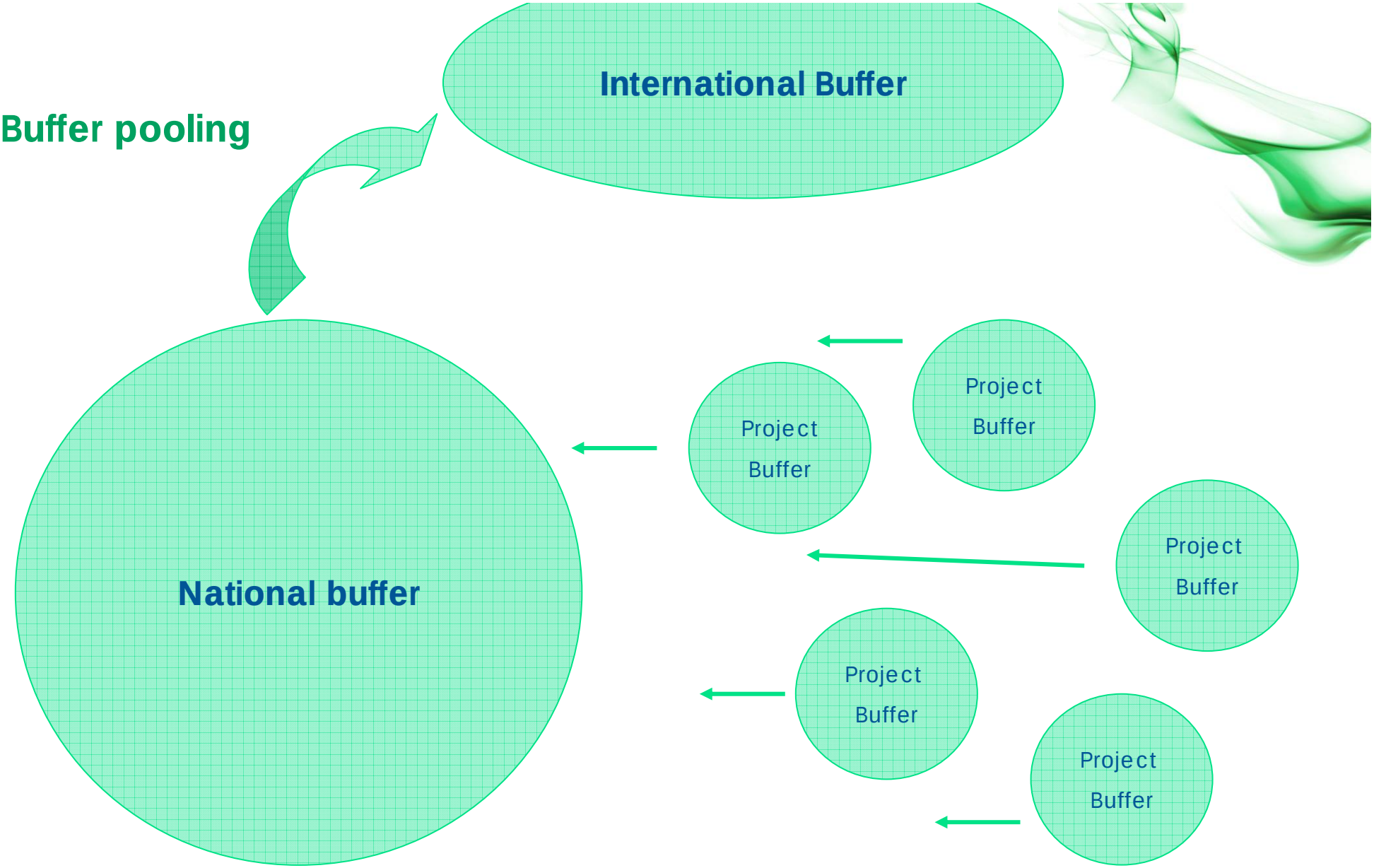
Plantations: average loss 2-7% due to fire/ pest/disease

REDD



VCS foresees buffer areas 5 – 60%

Buffer pooling



Permanence of forestry credits in VER schemes

- **Australia Carbon Pollution Reduction scheme**
  permit is valid only until carbon pool is maintained, replacement liability is with projects
- **NSW**
  100 year permanence period + regulator has right to prevent removal
- **VCS**
  project risk ranking + buffer are 5 – 60%
  ideally buffers are pooled in one international buffer
- **New Zealand ETS**
  established sinks need to be maintained, replacement liability lies with projects

The way forward

- There is urgent need for pragmatic approaches that work in a developing country context
- Carbon buffers are the way forward on the short term
- The Nested Approach (proposal for REDD) provides a good example of buffer pooling and crediting at project & national level
- 15 countries own 75% of global forests
  a. Design of a first agreement to start with few countries should be possible
- MunichRe's Climate Insurance Initiative applies a risk tier approach to share risks
  a. A way forward on commercial insurance?

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