



Natural Resources, Environment and Sustainable Growth in Mozambique –

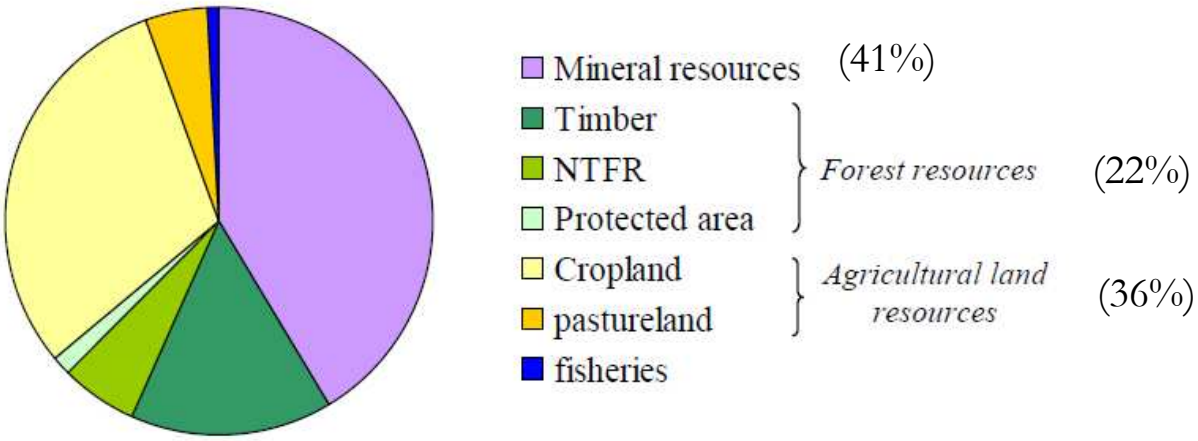
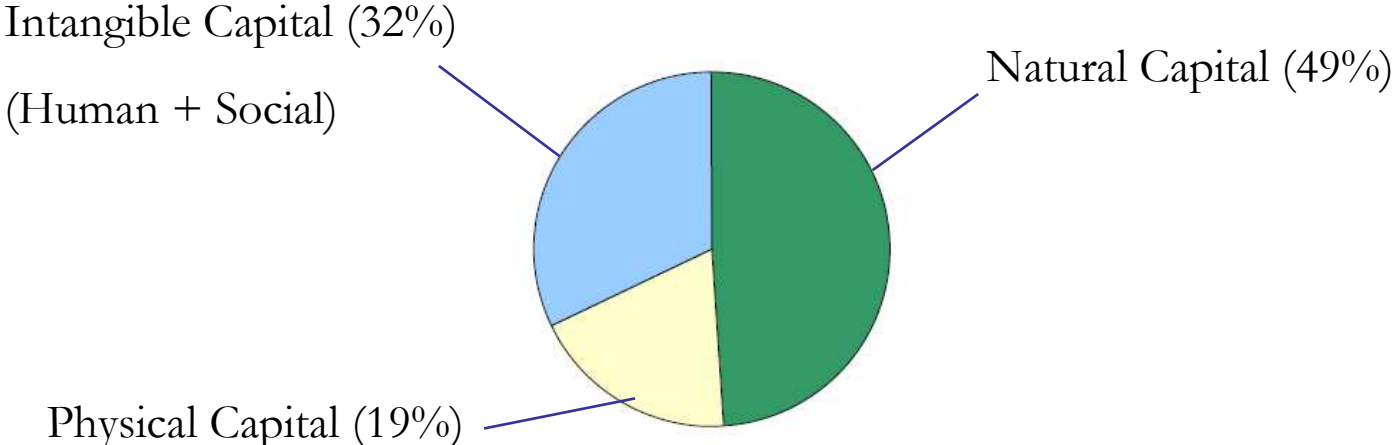
SUMMARY

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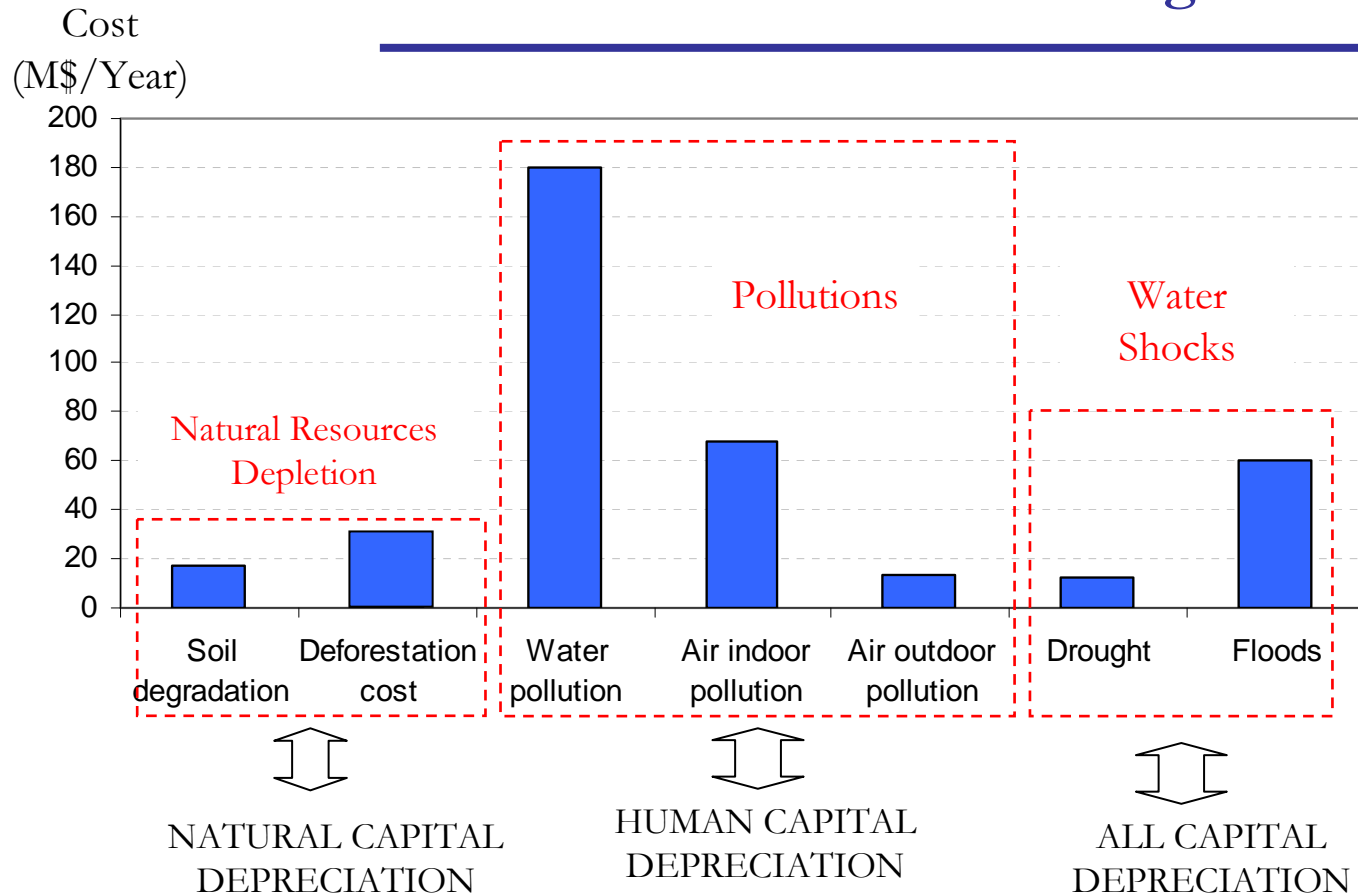
July 2009



Composition of Mozambican Wealth (2005)

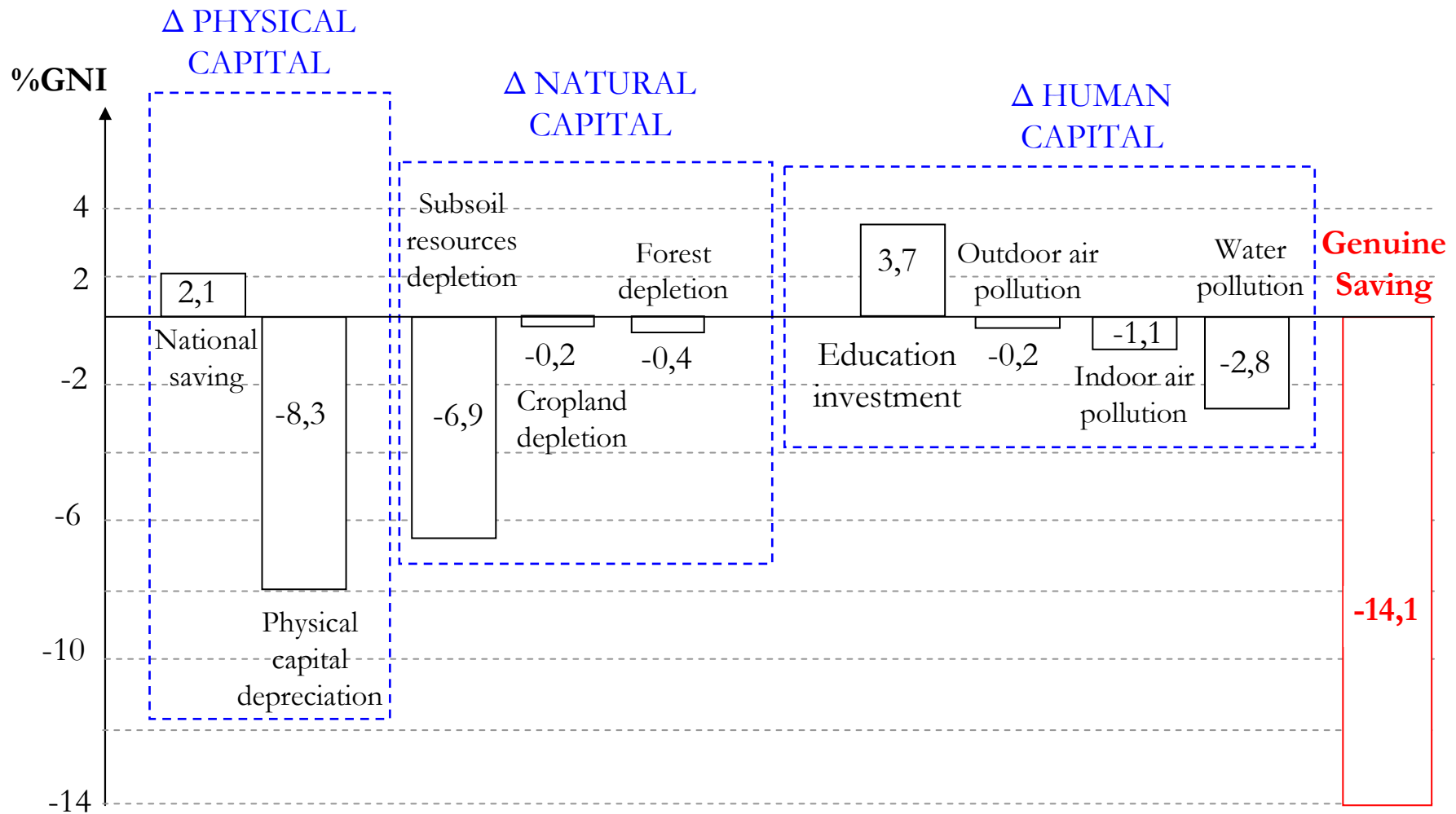


Costs of Environmental Degradation (2005)

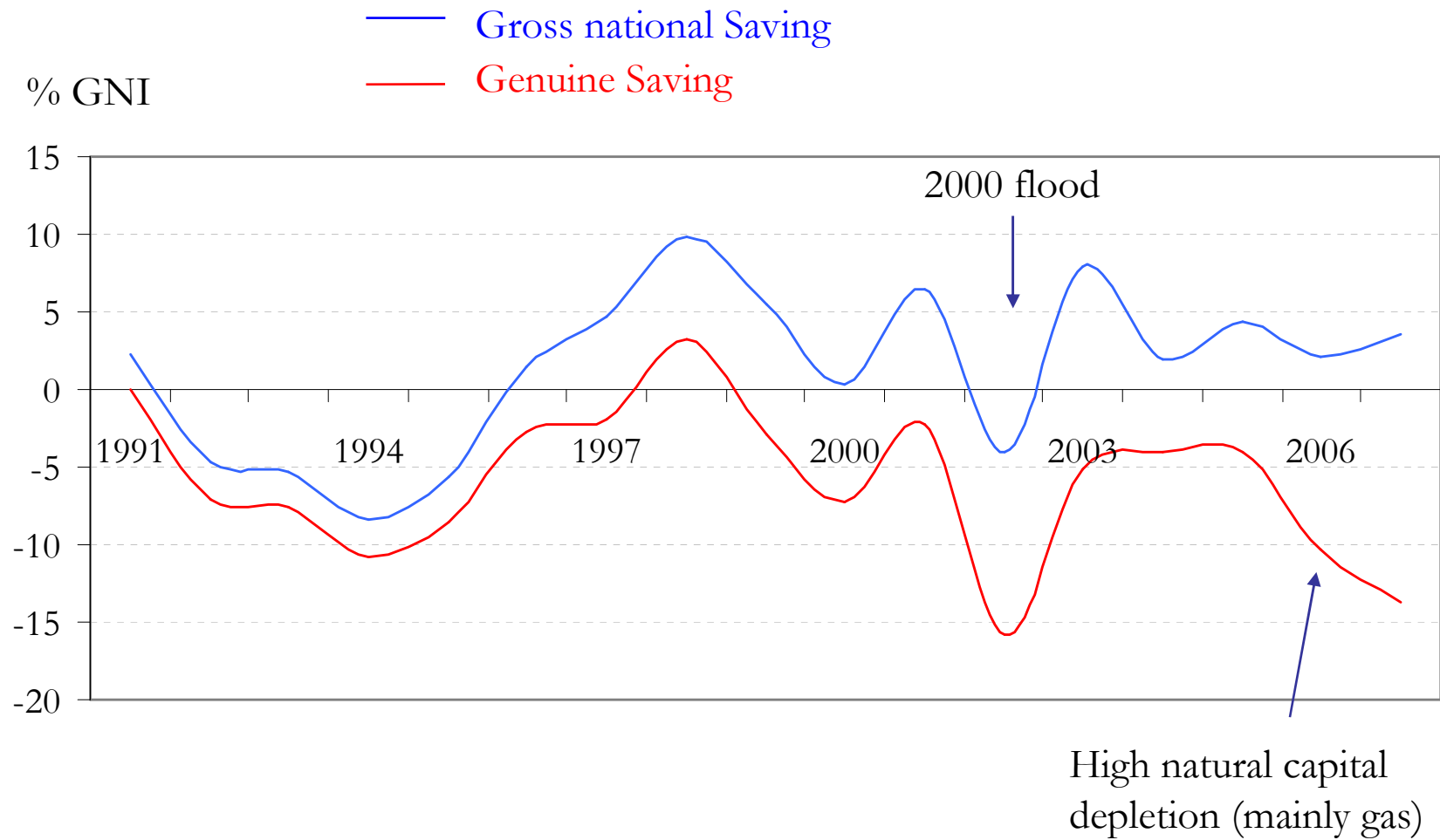


- About 6% of Mozambican GDP
- 20% of Overseas Development Assistance (ODA)

Genuine Saving Decomposition for the year 2005



Genuine Saving Evolution over the last 15 years



Main Findings

- **Economic growth sustainability is at risk**
GNS < 0 => Mozambique taps in its productive base
GNS= - 0,92 billions \$ = -1% of total wealth
- **High impact of pollutions on health**
=> Mozambique's high investment in education counterbalanced by air/water pollution
- **High impact of climate shocks**
- **Relatively low depletion of renewable natural resources**
=> But high potential of productivity gains to unlock
- **Question about mineral resources rent management**
(Hartwick rule)

Issues at stake: maximization of economic benefits from sustainable and equitable use of resources

- Reducing the cost of environmental degradation
 - Soil degradation: how to measure it effectively and accurately?
 - Land use changes and cost of deforestation
 - Health costs due to poor access to water and sanitation, indoor and outdoor pollution
 - Pollution from mining activities
- Valuing resources
 - Forestry: How to better assess forest value according to species composition given selective exploitation of most valued species?
 - Biodiversity conservation: what potential for protected areas?
- Setting priorities
 - What kind of economic contributions (growth, employment, exports, budget earnings) can be expected from different resources in different regional settings?

Issues at stake: maximization of economic benefits from sustainable and equitable use of resources

- Rent measurement, expansion, collection and management
 - Gas and non renewable resources: rent to be reinvested
 - The country is becoming a “renter” state => how to get prepared not to fall into the ‘resource curse’ syndrome?
 - Renewable resources
 - Are forestry and fisheries sustainable?
 - Industrial fishing, forestry: how to improve returns on natural capital?
 - Value-added of processing vs. exporting raw shrimp or timber?
- Introducing new management instruments?
 - Adjusting fees to resource value (esp. location of forest resources)
 - Introducing competition in use rights allocation?
 - Long term concessions (forestry) with incentives to sound management
 - Decentralized management?
- Sustainable funding for environment and resource protection

... Still some work to do, partly new

- What priorities in terms of data collection?
- What research priorities for policy making?
- GNS calculation on a regular basis?
- Sector work to be conducted
- How to link with macroeconomic work with sectoral policies?
- ...

Interpretation Framework for genuine saving – How to boost investment in the different assets?

Asset considered		Main results	Policies involved – How to boost investment in this asset?
<i>Physical capital</i>		<ul style="list-style-type: none"> - low national gross saving - high depreciation 	What monetary and fiscal policies boost gross saving rates and limit produced capital depreciation?
<i>Natural Capital</i>	<i>Exhaustible</i>	<ul style="list-style-type: none"> - important exhaustible resources depletion 	<ul style="list-style-type: none"> - Do fiscal policies capture well the rent? - What about the reinvestment of the rent? (Hartwick rule)
	<i>Renewable</i>	<ul style="list-style-type: none"> - low renewable capital depletion 	<ul style="list-style-type: none"> - Do existing natural resource policies encourage over-exploitation? - How to boost the productivity of these assets?
<i>Human Capital</i>	<i>Education</i>	<ul style="list-style-type: none"> - important investments in education 	<ul style="list-style-type: none"> - Are enough resources reinvested into education? - Are these expenditures effective?
	<i>Health</i>	<ul style="list-style-type: none"> - high human capital depletion because of air pollution /unsafe water supply 	<ul style="list-style-type: none"> - Are pollutant emissions beyond the socially optimal levels? (level where marginal damages = marginal abatement costs) - What are the most cost-effective policies to reach this level?