

Sharing Disaster Losses

Designing a Flood Insurance System for Hungary

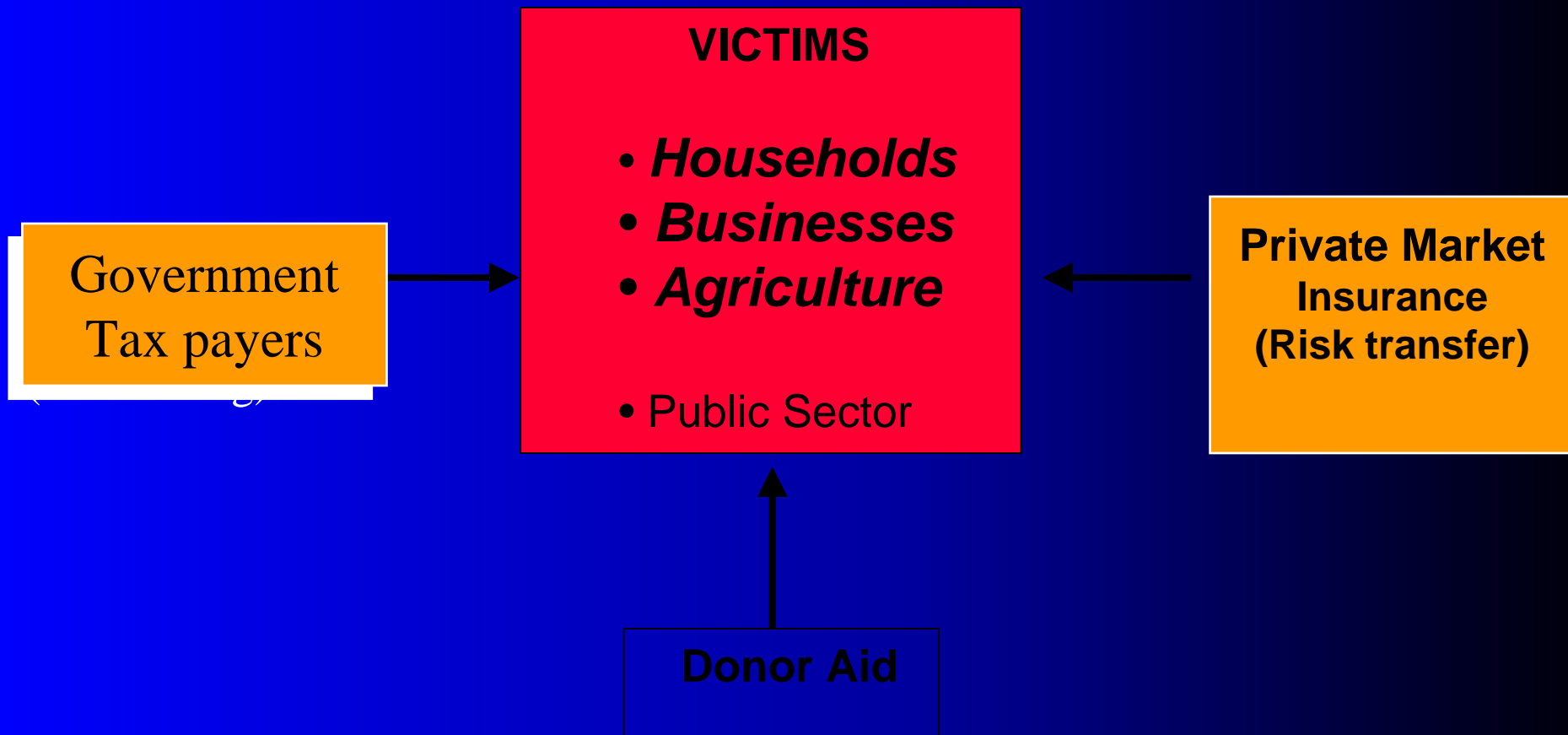
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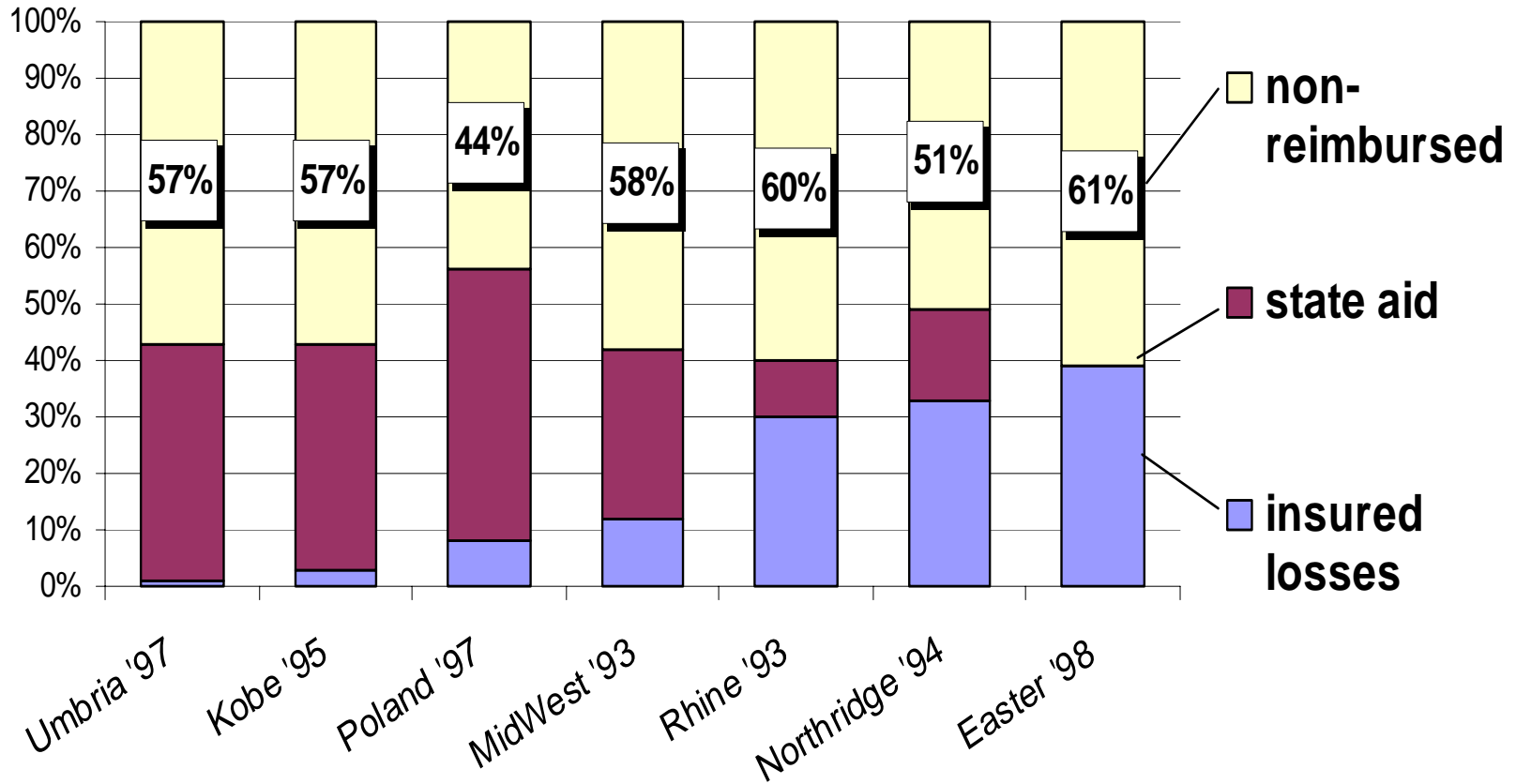
IIASA

Laxenburg, Austria

Risk Transfer and Loss Sharing



Losses reimbursed from insurance and government assistance as a percentage of AREDL



Hungary

Private
Reinsurance

Private Insurance
Voluntary
Flat rate

Government
Compensation

France

Taxpayer

CCR
Reinsurance

Public Insurance
Privately administered
Bundled
All hazards
Flat rate

Little government
Compensation

Turkey

Reinsurance
World Bank

Private
Reinsurance

Reinsurance
World Bank

Government
Insurance
Mandatory
Partly risk-based

Government
compensation
only to insured

Policy Question

Can we design a public-private mitigation and insurance system that is acceptable to the stakeholders?

- Government ministries (and their experts)
- Local authorities
- Water authorities
- High- and low-risk public
- NGOs (environmental groups)
- Insurance companies

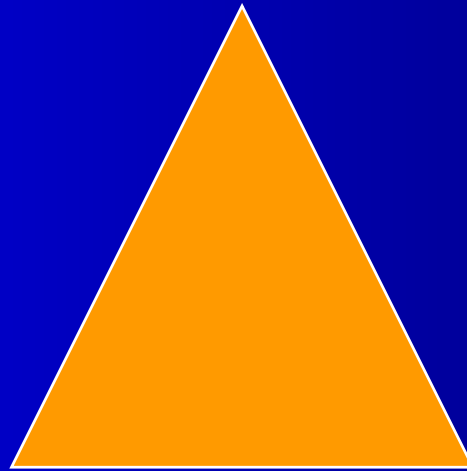
Hungary and the Tisza River



Round 1: Stakeholder Views

State Protection

- Structural mitigation to protect lives
- Government compensation to victims



Individualistic

- Self responsibility
- Private insurance
- Incentives

Holistic

Sustainable development
Mutuals

Round 2: Public Questionnaire

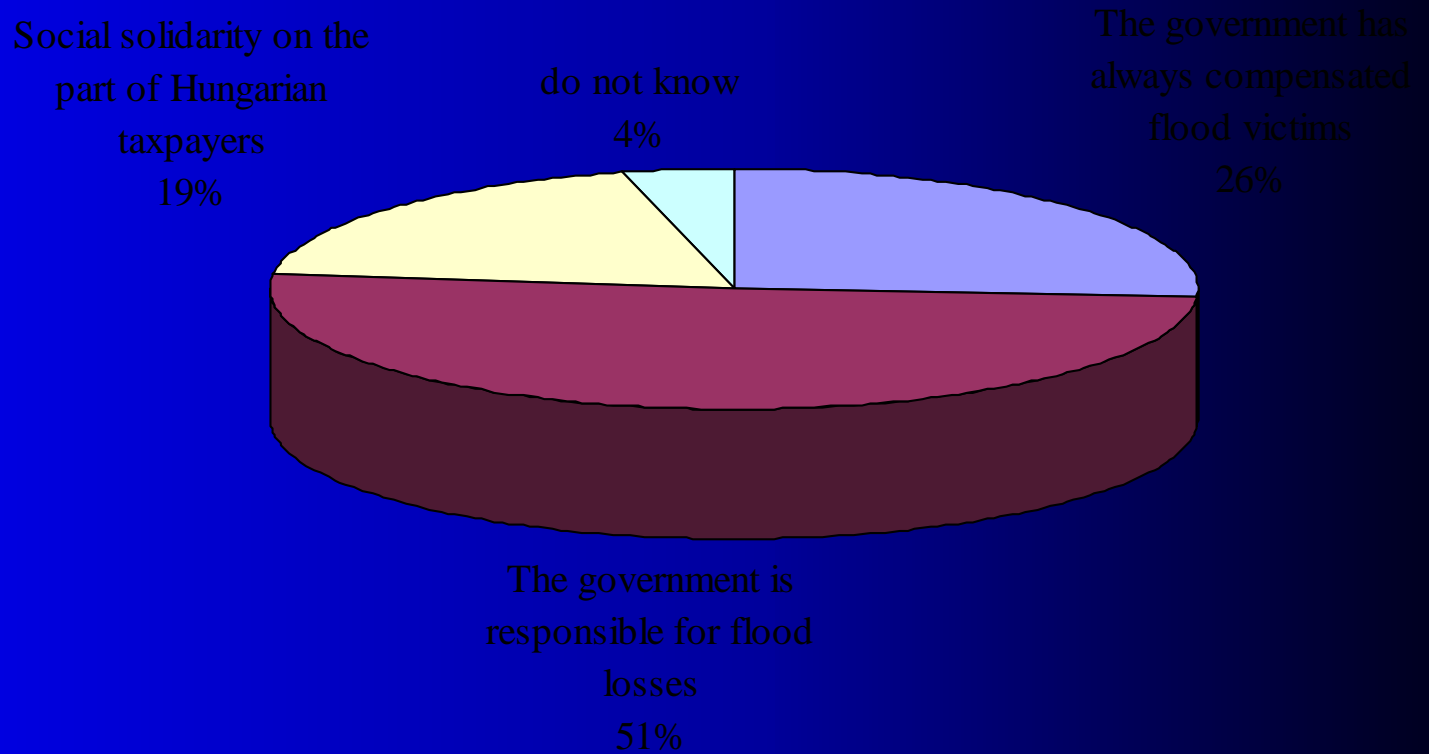
After a major flood, the government should compensate...

- 57% All victims by a certain percentage of their losses
- 19% All victims by the same amount, above which they can choose to have insurance
- 7% Only needy victims, that is, not owners of vacation homes or well-to-do businesses
- 3% Only victims with flood insurance
- 4% Only victims who have not built their homes in high-risk areas without a permit
- 0% No-one





What is the most important argument for government compensation?



Given conflicting stakeholder views and a heterogeneous public, how do we reach a stakeholder consensus on a flood mitigation/insurance system?

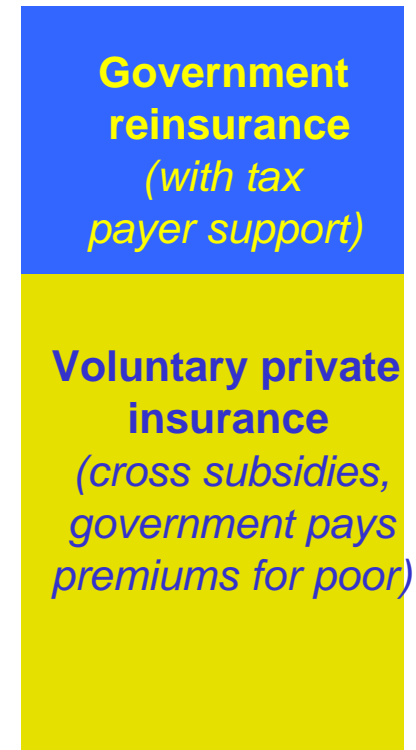
Round 3: Three Policy Paths for National Flood Insurance Program



Option 1

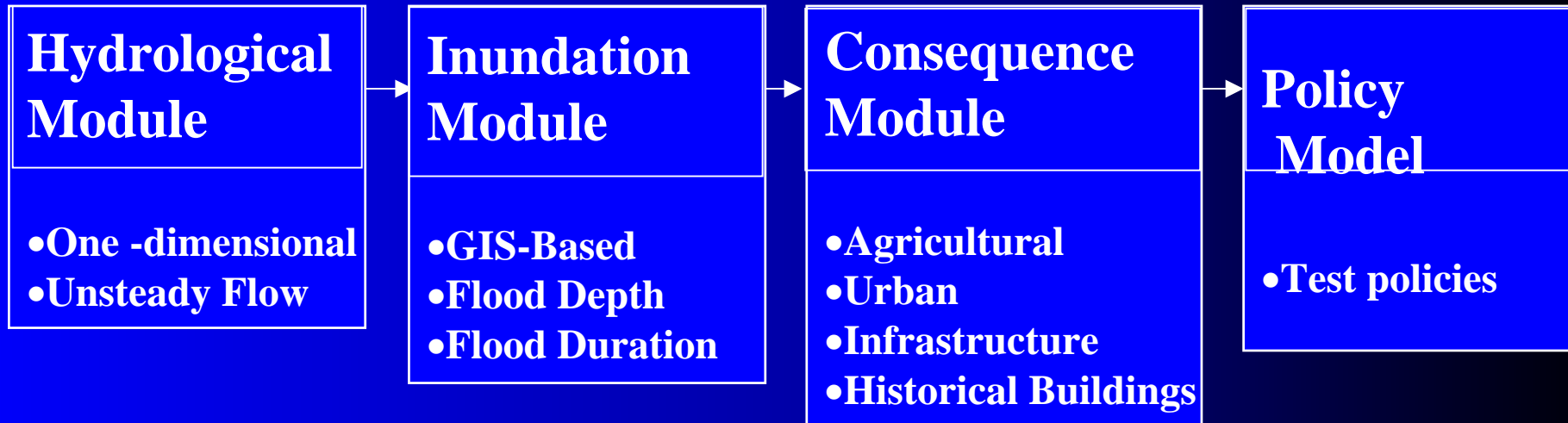


Option 2



Option 3

Flood-Loss-Policy Model



Result: During the 1000 simulated 10-year periods, failures occurred 146 times.

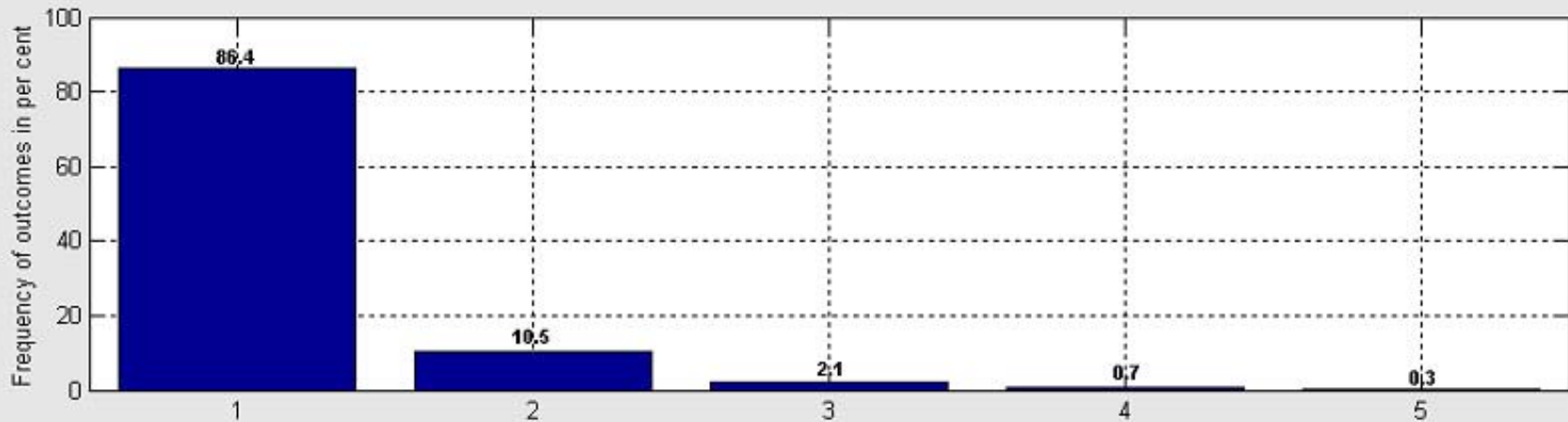
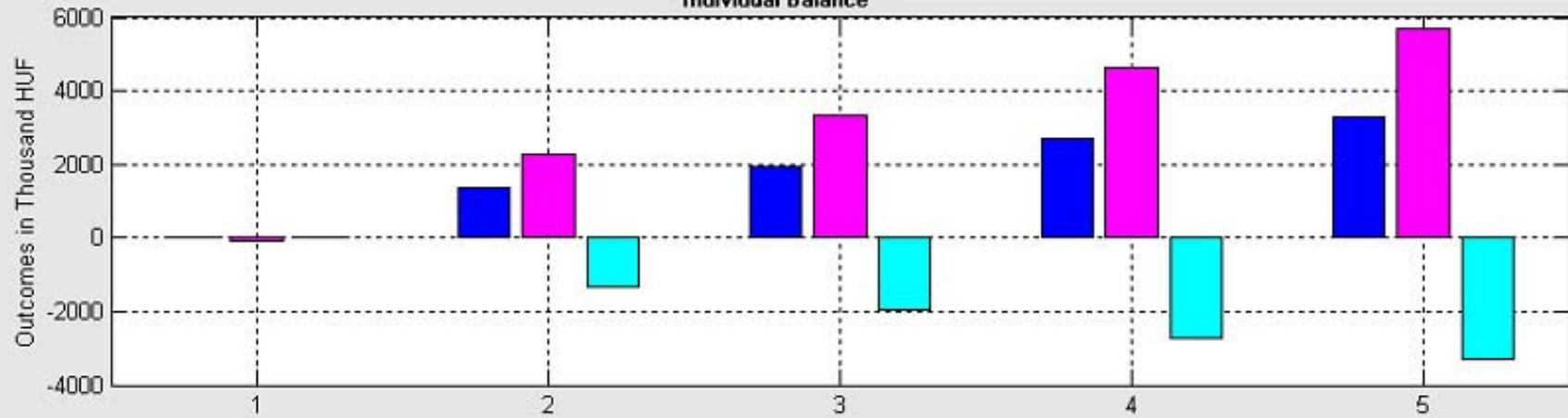
View results for: Scenario 1 Scenario 2 Scenario 3

View results from perspective:

- Government Insurer
 Pilot Individual

Individual Balance

The consequences for one example household situated in a high-risk area - property is fully insured.



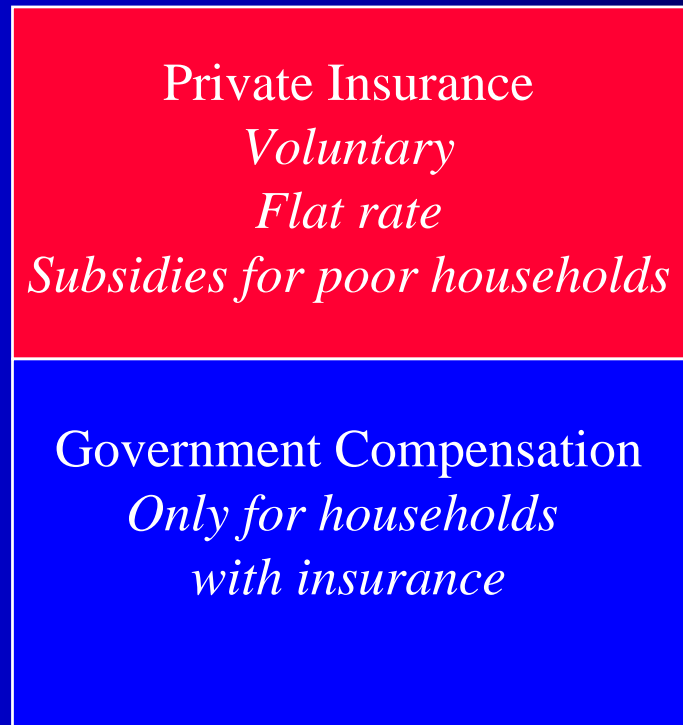
Generate Decision Tree

Close

Round 4: Stakeholder Workshop



The stakeholder consensus on a national insurance scheme





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