

# Management of Natural Disturbances

## Joint Logging Initiatives - Solidarity Funds

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- Small Scale Forest Owner → Typology and Characteristics
- Operational safety and health issues
- Operability and marketability
- Harvesting Sequence and Devaluation – Risk Sharing Models
- Basic Models for joint salvage logging activities
- Case Examples and solution during the Kyrill-storm disaster
  - Background
  - Goals
  - Pre-Conditions
  - Proceeding
  - Assets and Drawbacks
- Discussion and questions

## Typological and behavioural aspects

- Small scale forest owners:
- Different attitudes which can cause problems:
  - Not interested in Forest Management
  - Not trained
  - Not equipped
  - Not aware about risks for adjacent owners
- In case that higher amounts of timber are damaged
  - Not enough money to pre-finance the logging operations
- In case that a significant share of family income comes from forest operations → Family income is missing for years

## Work (Operational) health and safety (OSH)

	State Forest	Private	Communal	Contractors
Volume processed	7.400.000	4.230.000	10.560.000	
minus share contractors	2.738.000	2.749.500	3.801.600	12.900.900,00
Accidents	409	2742	953	505
Persons killed	1	17		
m <sup>3</sup> / accident	6694	1003	3989	25546

- Unexperienced
- Not trained
- No use of supportive machinery (e. g. excavators)
- Overestimation of one's own capabilities

- Experienced
- Trained
- High share of mechanized processing with harvesters

One of the weakest point in the whole strategy of salvation logging after storm Lothar 2000

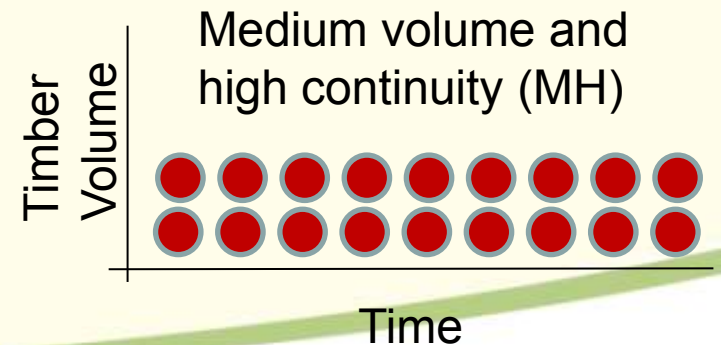
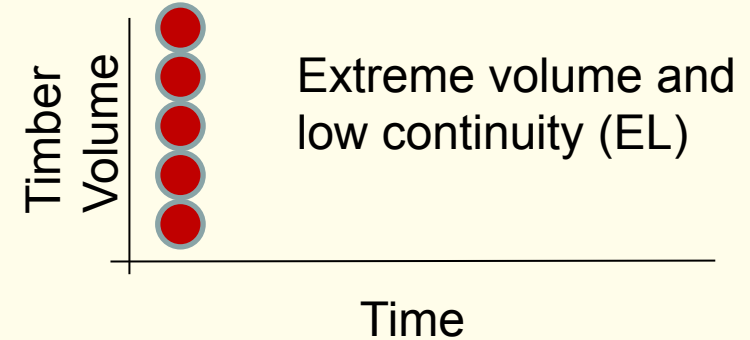
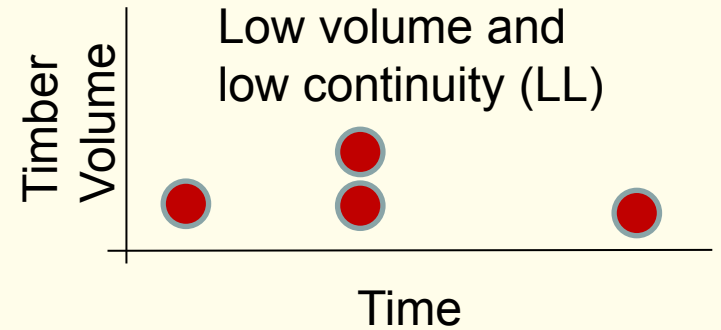
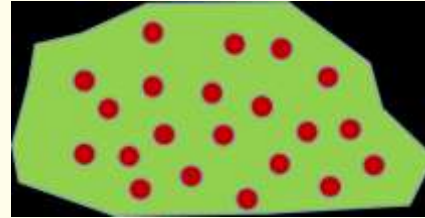
## Beneficial role of joint salvation activities I

- Professional management of the disastrous situation → Mechanisation
- Bundling of the marketable timber volume → better prices (hopefully)
- Reducing the risk of accidents

Challenge: Prefinancing of the harvesting (potentially storage) costs

### **Advantages**

- Prevention of unprofessional overhasty timber sales
- Help for over challenged forest owners
- Equal treatment for all forest owners involved
- Value of the timber is only determined by volume and normal timber grade, but not from devaluation due to delayed processing date
- All forest owners (state, communal can be included)
- One large owner takes the responsibility
- Participation is voluntary
- The largest partner overtakes the prefinancing of the measures (surety bond possible)
- Foundation of a board of the local & regional caring society



LL:

Volume for mechanized logging to low and discontinuous

EL:

Not reasonable manageable!

In case of processing by the owners

→ Marketability of the timber at the same time not given – at least price decreases

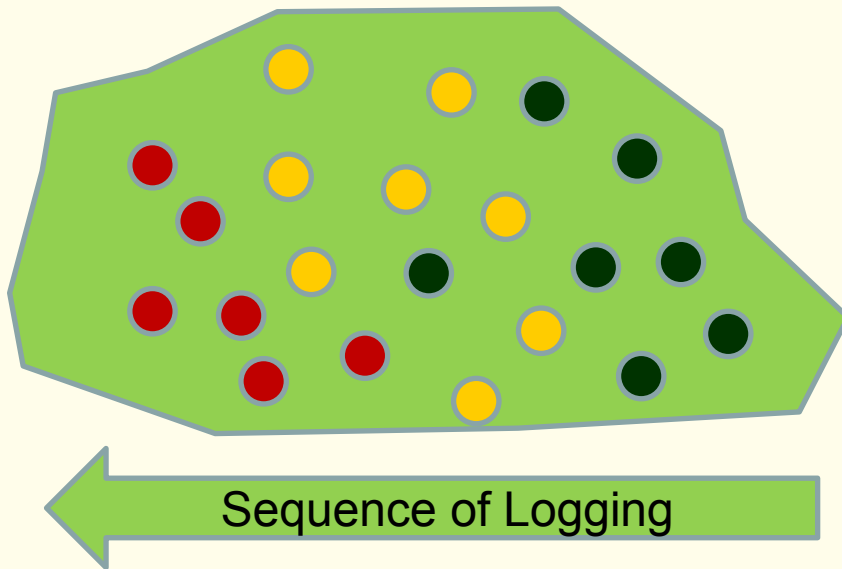
ML:

Desirable state with regard to capacity

Utilization and timber marketing

## Side effects:

Continuity can have negative side effects

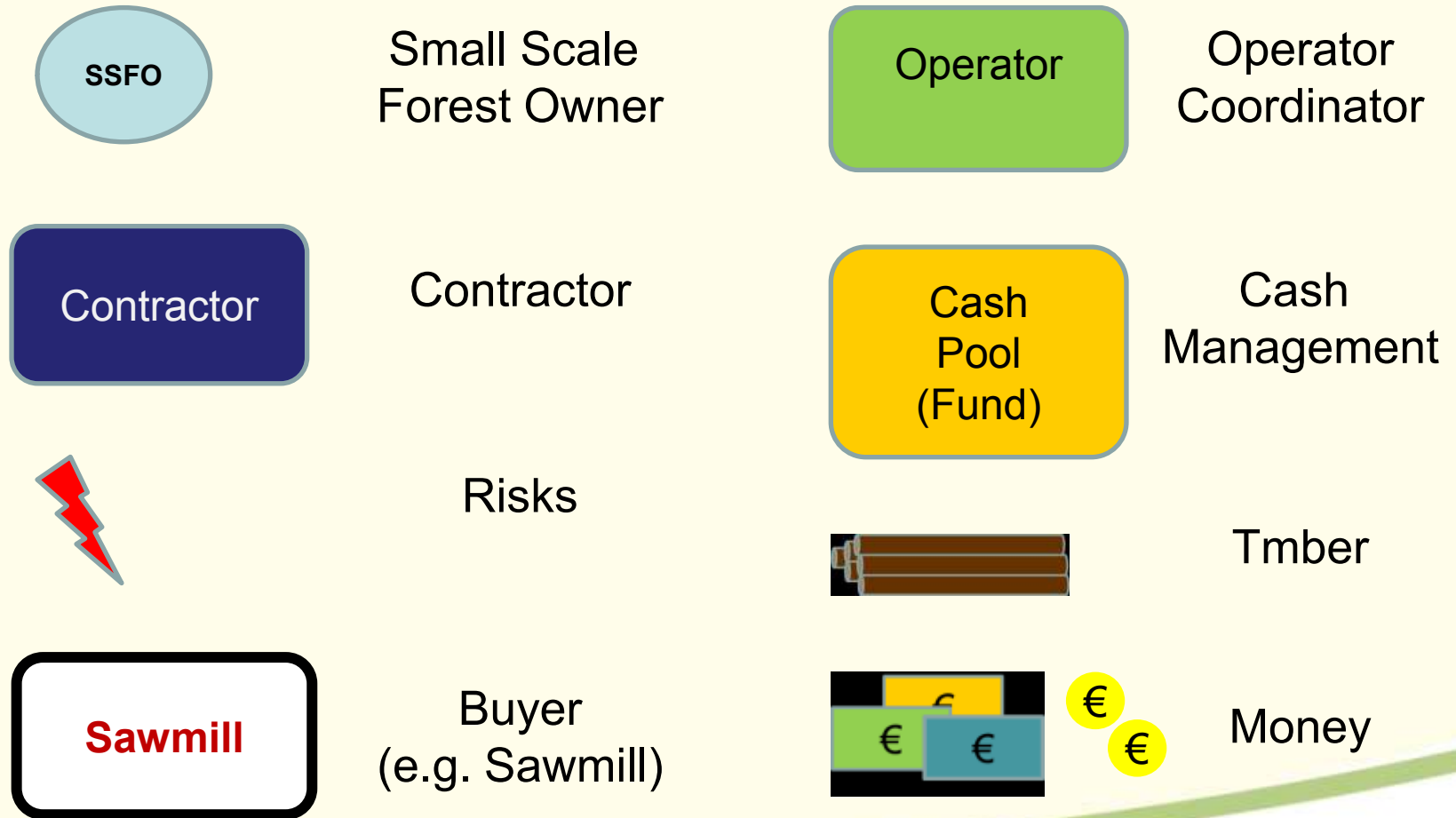


Timber quality and price

- normal
- decreasing
- low

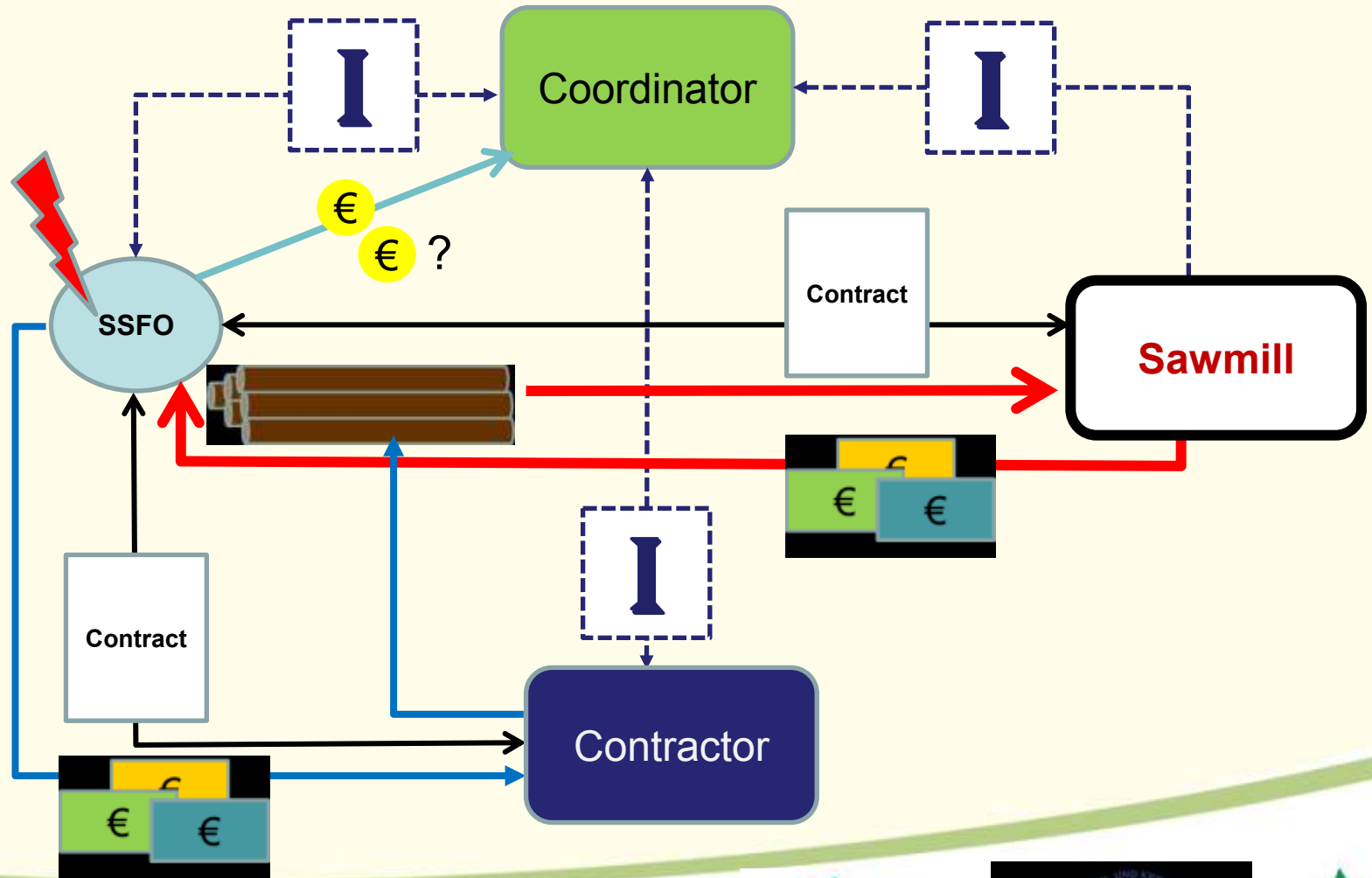
Willingness to cooperate could be improved by risk-sharing modell

## System components:





## Coordinator Modell I:



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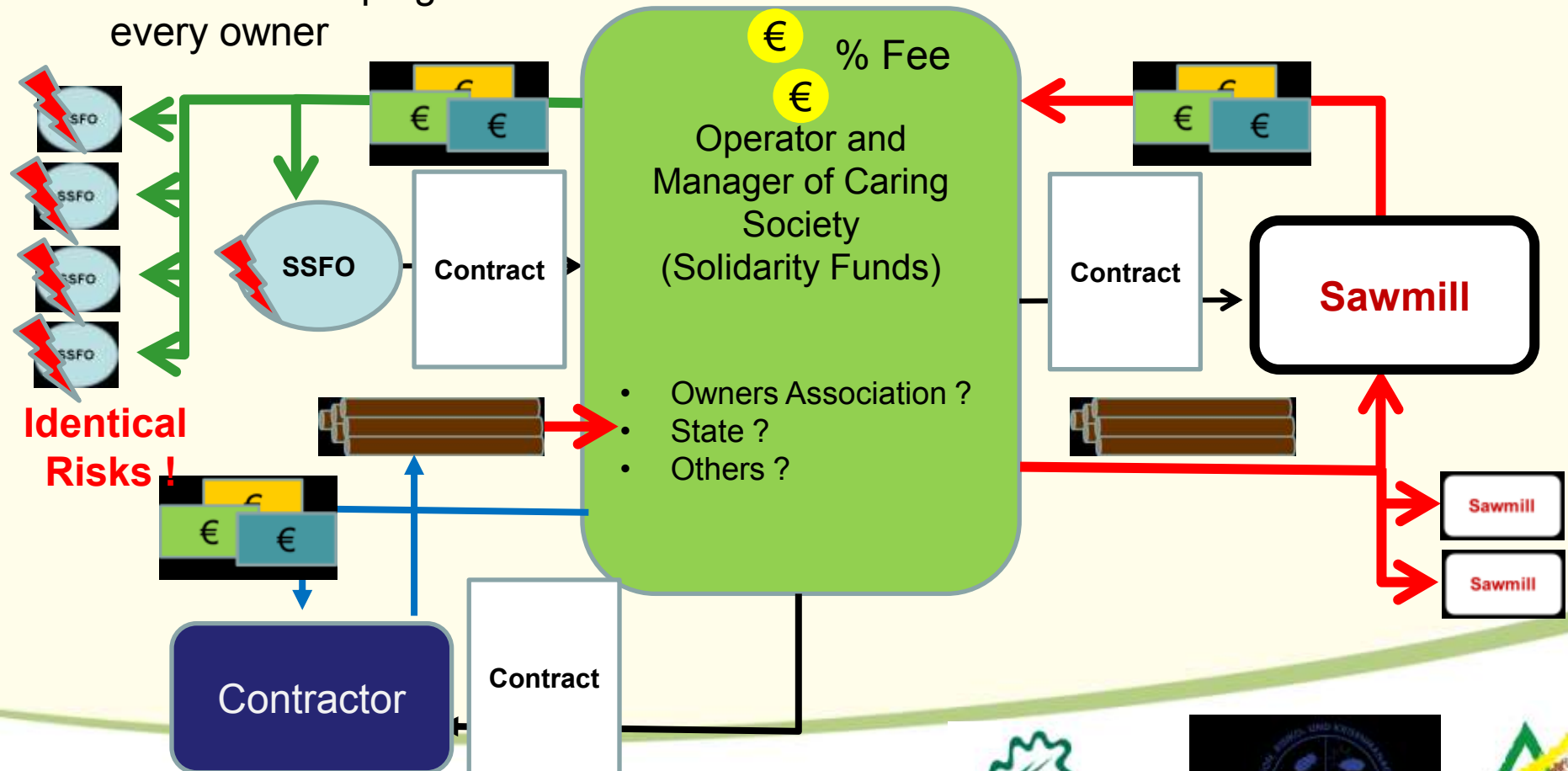
Opportunities	Threats
<ul style="list-style-type: none"><li>• Easy to organize</li><li>• No new organisation needed</li><li>• Intensity can be chosen comparatively free</li><li>• Decision remains totally at the private forest owners side</li><li>• Almost no preparatory measures necessary</li><li>• Incremental approach possible</li><li>• Can easily combined with self-procession by the owners</li></ul>	<ul style="list-style-type: none"><li>• Only weak influence on the coordination</li><li>• Competition cannot be avoided</li><li>• Unexperienced private forest owners have to negotiate with professional buyers and contractors</li><li>• Asymmetric knowledge</li><li>• Risk remains at the side of the private forest owner</li></ul>

## Operator Modell I:

Various alternatives for joint activities: Operator and Manager of a “Caring Society”

Average contribution margin for whole campaign and every owner

Daily price (changing)



**Identical Risks !**

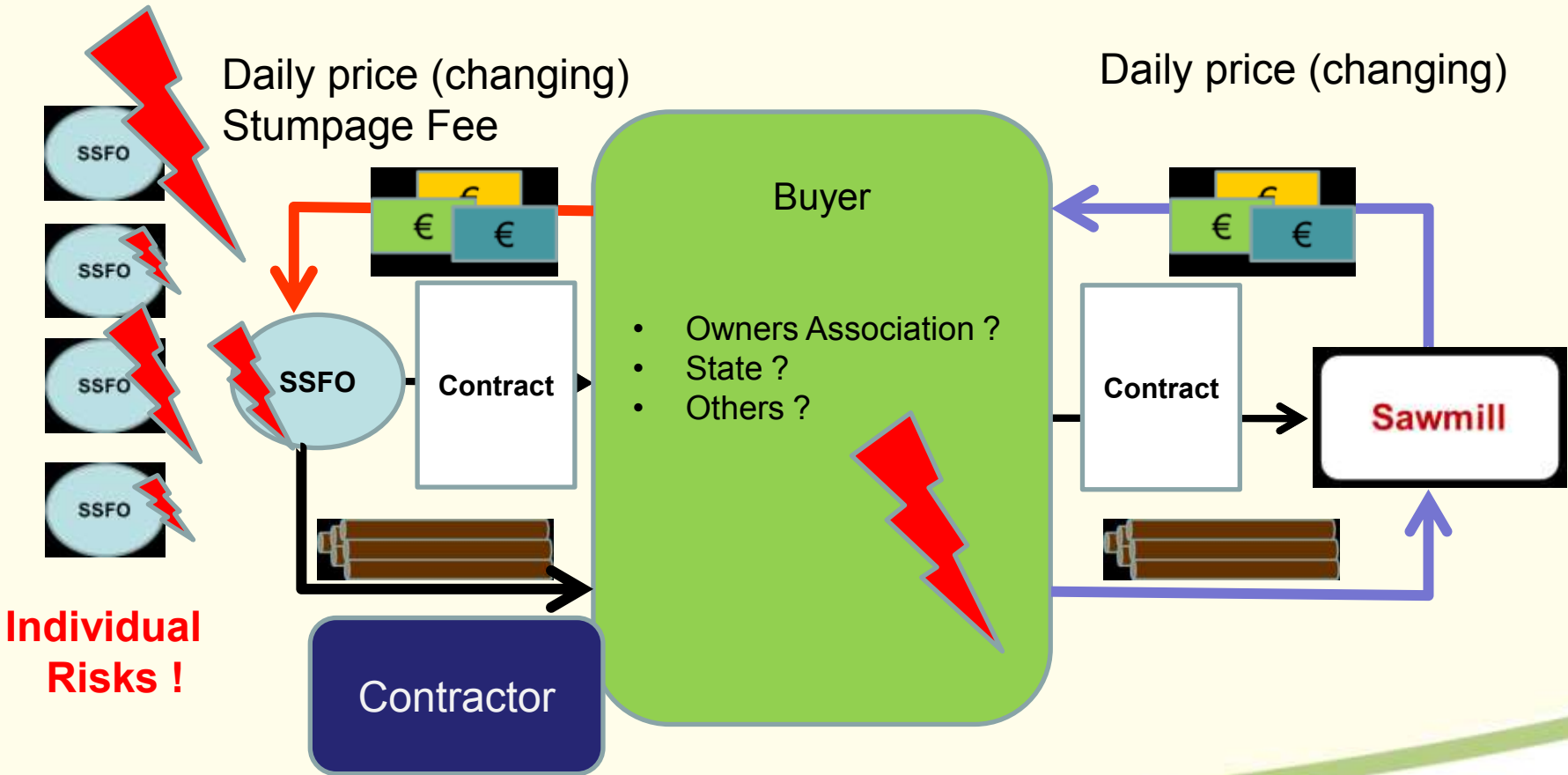
- Owners Association ?
- State ?
- Others ?

## Operator Modell II:

Opportunities	Threats
<ul style="list-style-type: none"><li>• Intensive coordination possible</li><li>• Minimised Risk of competitive behaviour of forest owners</li><li>• Reduced OSH risks, due to employment of contractors</li><li>• Professional negotiations with buyers and contractors possible</li><li>• Better prices to be expected</li><li>• Use of the 'economies of scale'</li><li>• All private forest owner are treated equally</li></ul>	<ul style="list-style-type: none"><li>• High input required</li><li>• Cost intensiv</li><li>• All problems (even the unavoidable ones) are a guilty of the operator</li><li>• Risk of 'moral hazard', when private forest owners do only participate partially</li><li>• Real contribution margin/m<sup>3</sup> can not be forecasted</li><li>• Insurance against pure financial loss needed (if not covered by state)</li></ul>

## Buyer Modell I:

Various alternatives for joint activities: Buyer (transfer of ownership of timber)



## Buyer modell II:


Opportunities	Threats
<ul style="list-style-type: none"><li>• Owner knows timber price (stumpage fee) before final decision</li><li>• No risk for the owner</li><li>• Easy to organize (only search for private buyer)</li></ul>	<ul style="list-style-type: none"><li>• Buyer (if profit oriented) is keen to maximise his profit</li><li>• Lower prices for owners to be expected</li><li>• Buyer will coordinate his own business, however competition with other buyers, contractors to be expected</li><li>• Buyer (if related to owners associations) will optimize situation only for own members</li><li>• Owners association are partially not used to act as a commercial establishment.</li><li>• Owners receive different prices</li></ul>

## Beneficial role of joint salvage logging activities V

Mixed models are possible (case and framework related)

Voluntariness and acceptance of the participants play a key role

**Joint salvage logging activities have been successful in almost all cases.**



**Great efforts by the State Forest Administration and voluntary representatives from owner (and / or their associations) needed.**

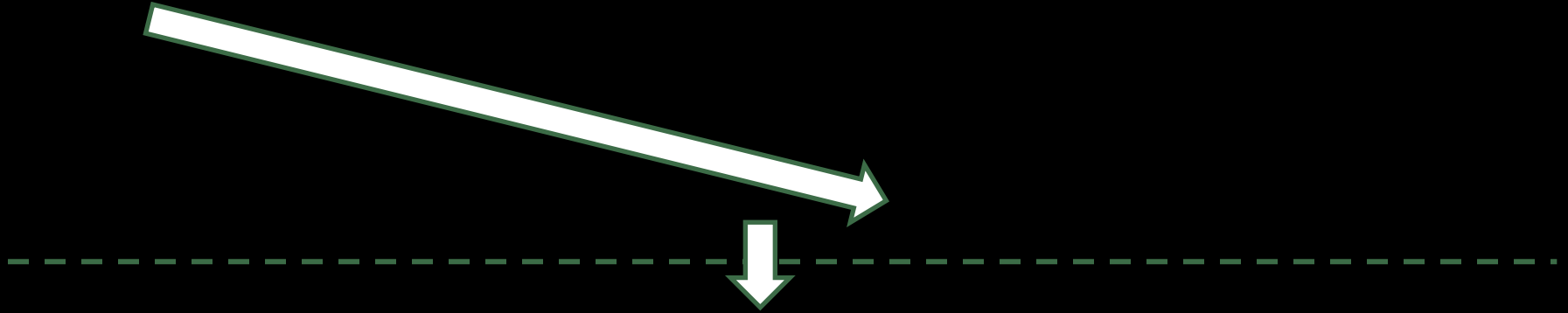
Similar findings in other states in 2007







# Background



# Goals

# Pre-Conditions



# Proceeding

# Proceeding (2)

# Assets and Drawbacks

