

---

First Regional Europa Re Insurance Conference

**Developing Catastrophe and Risk Markets in Southeast Europe:  
From Concept to Reality**

---

Innovating in catastrophe insurance

**Overview of Europa Re products**

Alma Qamo

# What Europa Re will offer in SEE countries?

**Broad access to high quality catastrophe and weather insurance coverage for homeowners and SME's**

**Through**



- On a stand alone basis **NEW**
- Backed by risk models, and actuarial pricing **NEW**
- Supported by alternative distribution and modern claims infrastructure **NEW**

---

# **Earthquake & Flood insurance Base-line products overview**

# What types of property can be covered? (earthquake and flood insurance)

## Buildings, or parts of them

- owned by insured
- fully constructed
- fixed to land

*occupancy types:*

- (i) dwellings*
- (ii) industrial*
- (iii) commercial*
- (iv) public*

## Auxiliary structures (garages, etc)

- owned by insured
- fully constructed
- fixed to land

*can be insured only as  
extension to building  
insurance*

## Contents (furniture, machineries, etc)

- owned by insured
- located inside  
insured building

*can be insured only  
as extension to  
building insurance*

# What losses are covered?

(earthquake and flood insurance)

## Earthquake insurance

### physical loss of property:

(i) **directly caused by earthquake** which occurs during any loss period of **forty – eight consecutive hours**;

(ii) by **fire caused by earthquake** which occurs during the **forty-eight consecutive hours after earthquake shock**

## Flood insurance

### physical loss of property

during any loss period of **one hundred sixty eight consecutive hours**, and caused by **water that has been on the ground at before reaching property**:

(i) inundation and/or alluviums coming from the natural overflowing of flowing or stationary surface waters,

(iii) temporary atmospheric precipitation, including melting of snow or ice

# What limits can apply?

(earthquake and flood insurance)

## Limits for buildings, or parts of them

- not more than replacement cost (RC) of the building.  
practical approach.

**RC =**  
**area in sq. m. X RC**  
**per sq.m.**

- not less than a minimum amount  
(eg. Euro 20 thousand)

## (Sub)limits for auxiliary structures (garages, etc)

- not more than replacement cost (RC) of the auxiliary structure.

- various approaches depending on type of main building.

Eg.: Sublimit for householder's garage:  
**up to 20% of limit for the house**

## (Sub) limits for contents (furniture, machineries, etc)

- various approaches depending on type / occupancy of main building

Eg.: Sublimit for householder's contents: **up to 10% of limit for the house**

# What deductible?

(earthquake and flood insurance)

## Flexible

-Various levels of deductible can apply to different types of risks

For example:

**homeowners**

**3% of limit**

**SME's**

**4% of limit**

**Government risks**

**2% of limit**

-Various levels of deductible can apply to the same group of risks, upon clients request.

**homeowner1**

**2% of limit**

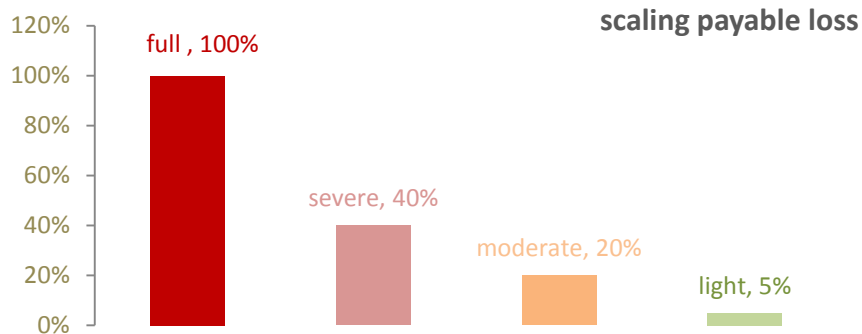
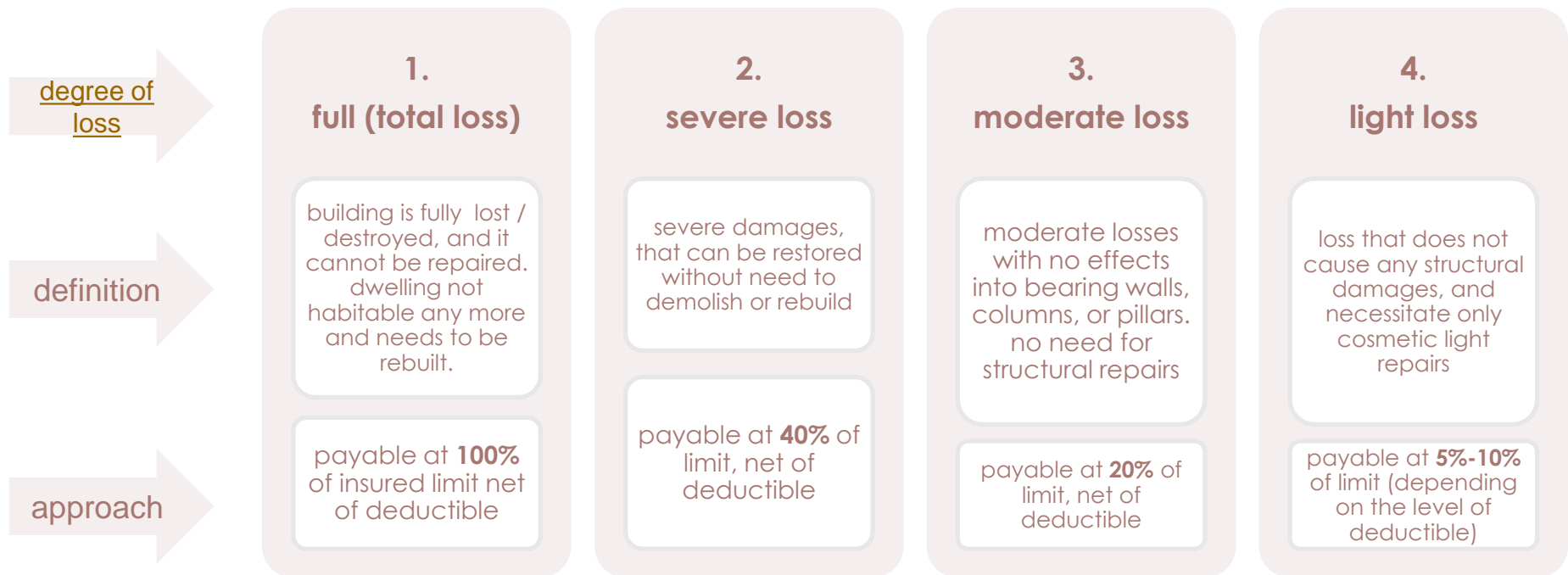
**Homeowner 2**

**3% of limit**

**Homeowner 3**

**5% of limit**

# Claims assessment – practical approach (earthquake and flood insurance)



**same degree of loss applies to building & contents**

advantages:

- enabling claims remote sensing techniques
- quick assessment and immediate payment
- less fraud & manipulation

## Other (earthquake and flood insurance)

### Other policy features

#### mortgage clause

bank as beneficiary  
for the respective  
loan amount

#### general policy exclusions

war, nuclear energy,  
etc

#### other clauses

legal, and other as  
might be required  
from legislation, and  
experience

### Simple & quick procedures

#### underwriting

- simple underwriting  
for structures
- no itemization for  
contents (eg. for  
homeowners)

#### claims reporting

- easily accessible  
claims assessment  
network;
- simple claims  
reporting process

#### claims settlement

- simple claims  
settlement procedures
- quick payments  
(foreseen within 30  
days)

---

# **Parametric weather insurance Base-line products overview**



# Features of weather insurance products



---

## Simple

**all in one page** contracts

---

**no underwriting**

---

## Easy to administer

---

**no need for professional sales network**, can use massive sales channels

---

**automatic claims assessment**, without need for individual approach

---

## Low costs

---

**low administration costs** through easy processes

---

# Europa Re proposed products will cover:

## 1. Precipitation



## 2. Temperature



Main principle of parametric weather insurance:

**Coverage in case of unusual behavior of weather**

# Excessive precipitation insurance

## *brief terms & conditions*



### What triggers an insurance event?

when amount of **precipitation exceeds minimum thresholds** on daily basis, or for all period

*daily values measured officially by Authorized National Weather Service*

### What types of thresholds?

**minimum** and **maximum** thresholds (*based on long term average*)

- (i) for **all coverage** period
- (ii) for **a single day**

### How to assess?

(i) get **daily precipitation amounts**

(ii) calculate **total precipitation**

(iii) **compare** daily and total amounts to thresholds

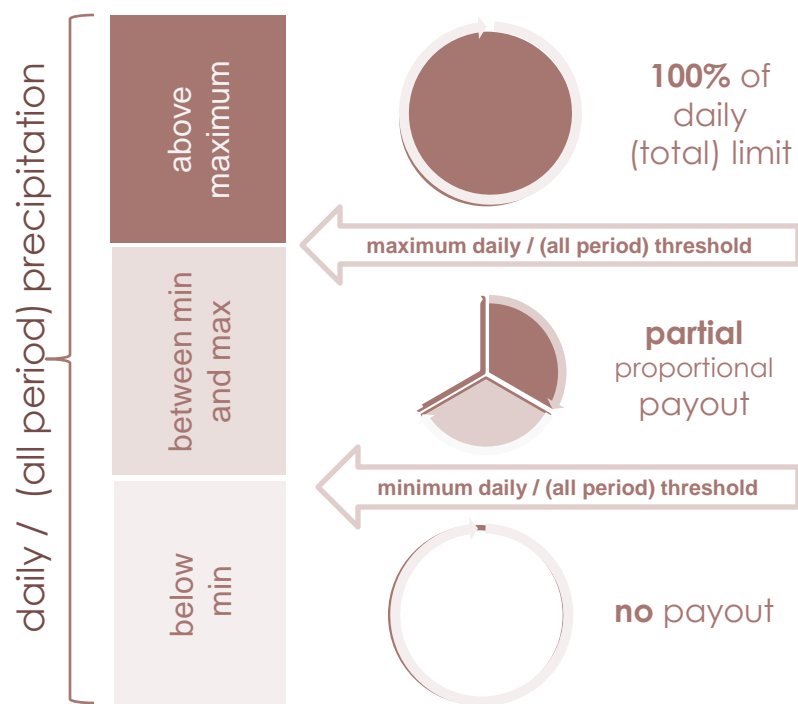
*no need to assess individual claims of insured*

# Excessive precipitation insurance (contd.)

## claims issues



### I. Assess daily/(all period) payouts (similar approach for both)



### II. Assess total payouts

(i) **sum up daily payouts** for days with excessive precipitation till policy limit is reached

(ii) calculate **payout for total excessive precipitation** over all coverage period

(ii) total policy payout shall be **maximum of (i) and (ii)**

# Excessive precipitation insurance (contd.)

## a payout example



### Policy terms:

policy limit: 100%;

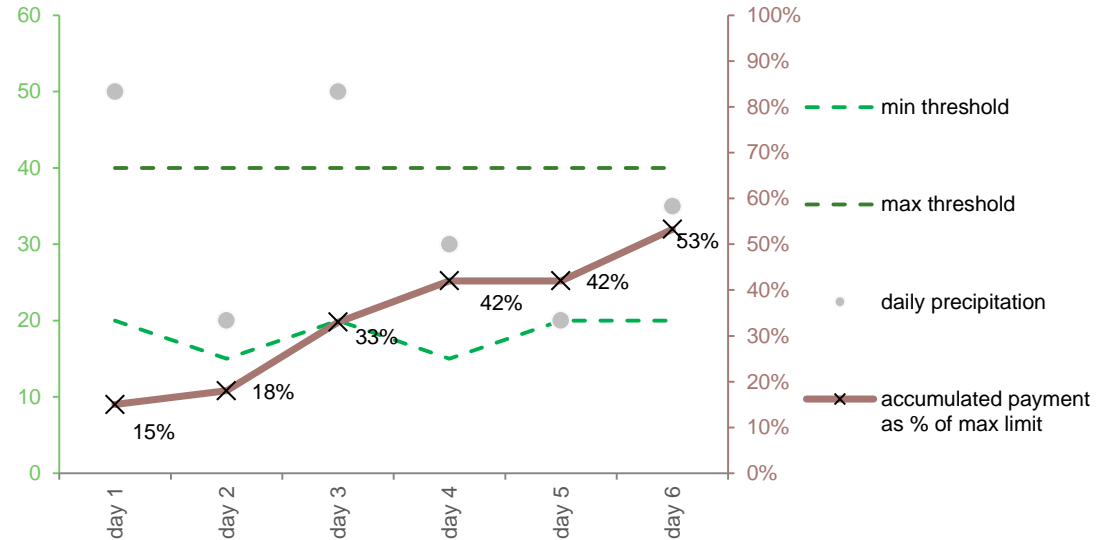
### all period thresholds:

- Min: 210 mm
- Max: 300 mm

### daily thresholds

- Min: 20 mm, if in the previous day has not rained more than 30 mm
- Min: 15 mm otherwise
- Max: 40 mm
- proportional payouts in intervals between min and max thresholds

period	min threshold	max threshold	max payout (% of limit)	daily precipitation	payout as % of policy limit	accumulated payment as % of max limit
day 1	20	40	15%	50	15%	15%
day 2	15	40	15%	20	3%	18%
day 3	20	40	15%	50	15%	33%
day 4	15	40	15%	30	9%	42%
day 5	20	40	15%	20	0%	42%
day 6	20	40	15%	35	11%	53%
total period	210	300	100%	205	0%	53%



# Excessive precipitation insurance (contd.)

## *practical considerations*



### Product usage?

- to finance damages **to any kind of property** that can be **exposed to risk of floods that occur from excessive** precipitation, including: housing, energy, transportation, agriculture, livestock, etc.
- to **finance farmers losses** due to **negative effects of excessive precipitation to agricultural production**.

### What coverage periods?

- a **range of available coverage periods** can be chosen by clients, **farmers to decide based on the type of production** and its correlation with level of precipitation.

# Drought insurance

## *brief terms & conditions*



### What triggers an insurance event?

when total amount of **precipitation** for the period is **below the minimum threshold**

### What types of thresholds?

1. **minimum** threshold for period
2. **maximum** threshold for period  
*(based on long term average for period)*

### What precipitation values are accepted?

daily **values of precipitation measured** officially by Authorized National Weather Service

# Drought insurance (contd.)

## claims issues



### I. How to assess claims?

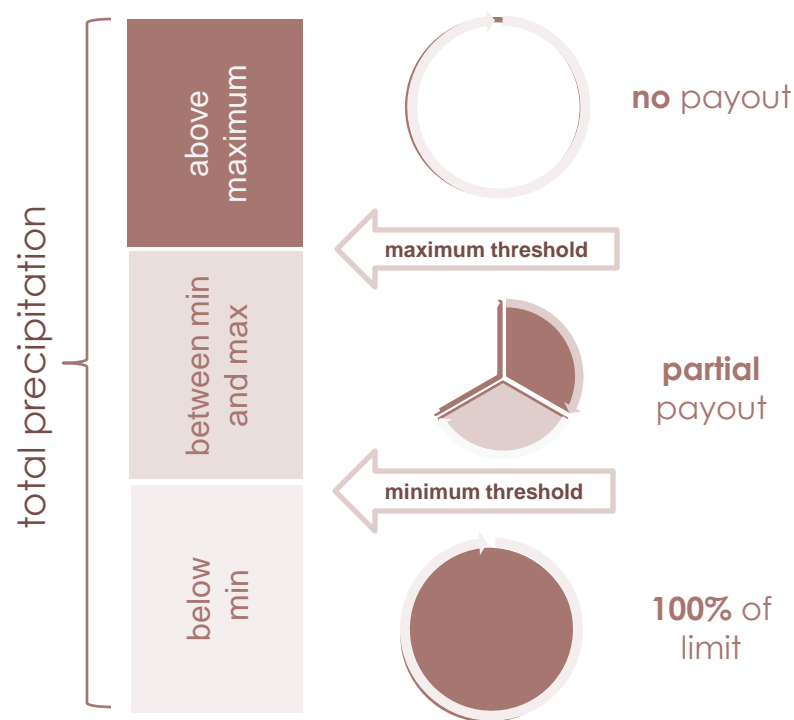
(i) **get daily precipitation amounts** for all days

(ii) calculate **total precipitation**

(iii) **compare** total precipitation with thresholds

*no need to assess individual claims of insured*

### II. How much payouts?



# Drought insurance (contd.)

## payout example



### Policy terms:

**policy limit: Euro 2,000**

### **period thresholds:**

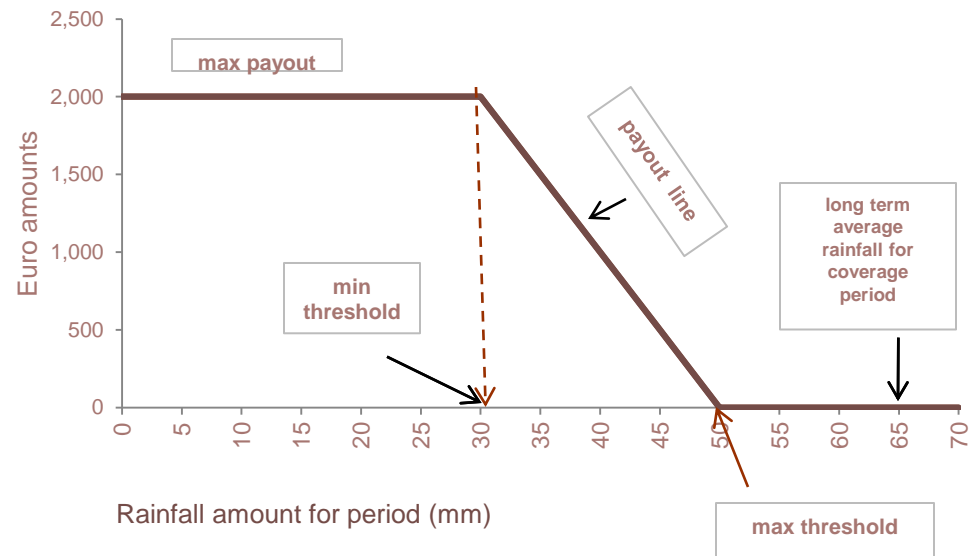
- Min: 30 mm
- Max: 50 mm

### **payout structure:**

- **policy limit** if total precipitation is below 30 mm
- **no payout** if total precipitation exceeds 50 mm
- **proportional payout** in intervals between 30mm and 50 mm

### Payout scheme

rainfall (mm)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
payout (euro)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,500	1,000	500	0	0	0	0	0



# Drought insurance (contd.)

## *practical considerations*



## Product usage?

product shall **finance losses** due to **negative effects of drought** to

- farmers for damage to agricultural production;
- hydro - energy suppliers for reduction of energy produced
- other

## What coverage periods?

a **range of available coverage periods** can be chosen by clients, **based on the type of production** and its correlation with level of precipitation.

# Temperature insurance – high heat

## *brief terms & conditions*



What triggers an insurance event?



event is triggered when maximum **daily temperature exceeds the minimum temperature threshold**

What types of thresholds?



**minimum** and **maximum** temperature thresholds  
*policy can also simply work with only one temperature threshold.*  
*(based on long term average)*

How to measure temperature?



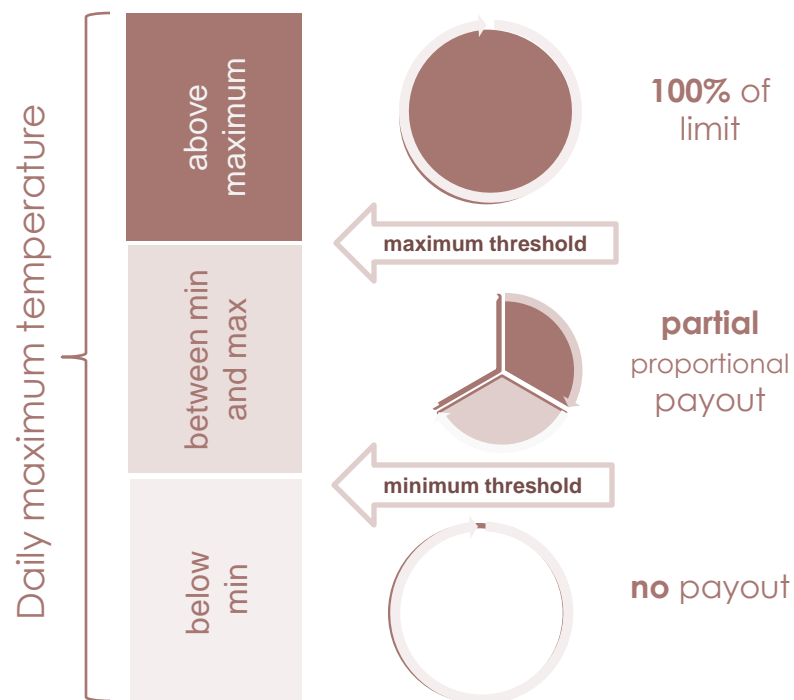
daily **official measurement** by Authorized National Weather Service

# High heat insurance (contd.)

## claims issues



### I. Daily payout structure



### II. How to assess claims?

(i) get **daily maximum temperatures** for days within coverage period

(ii) compare daily max temperatures with temperature thresholds and **assess daily payouts using daily payout structure**

(iii) **sum up daily payouts** till limit is reached

# High heat insurance (contd.)

## *payout example (two threshold option)*



### Policy terms:

**policy limit: 100%**

### **thresholds:**

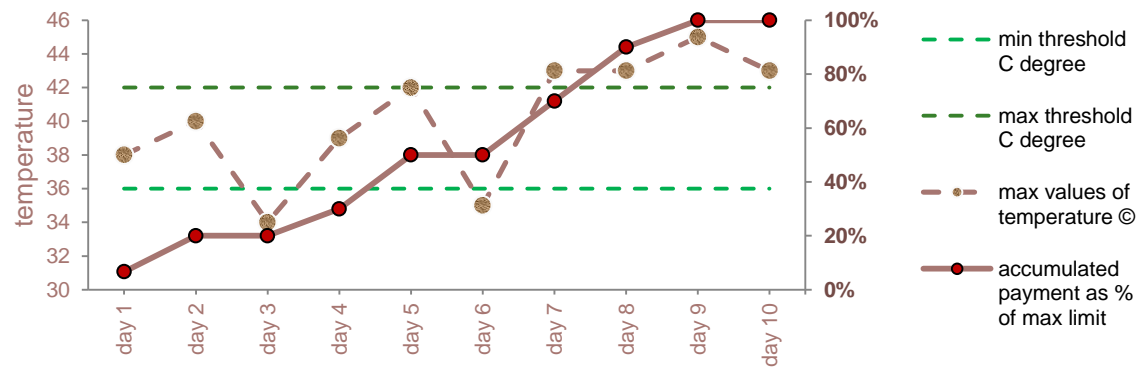
- Min: 36 Celcius degree
- Max: 42Celcius degree

### **payout structure:**

- 20% of limit for a day, when temperature is higher than 42 degrees
- no payout for a day with temperature less than 36 degrees.
- proportional payouts for a day with max temperature in intervals between 36 and 42 degrees

	min threshold	max threshold	max daily payout (as a percentage of limit)	max values of temperature ©	payout as % of limit	accumulated payment as % of max limit
	C degree	C degree				
day 1	36	42	20%	38	7%	7%
day 2	36	42	20%	40	13%	20%
day 3	36	42	20%	34	0%	20%
day 4	36	42	20%	39	10%	30%
day 5	36	42	20%	42	20%	50%
day 6	36	42	20%	35	0%	50%
day 7	36	42	20%	43	20%	70%
day 8	36	42	20%	43	20%	90%
day 9	36	42	20%	45	10%	100%
day 10	36	42	20%	43	0%	100%

high heat payout example



# High heat insurance (contd.)

## *practical considerations*



### Product usage?

product shall **finance losses** due to **negative effects of high temperatures, including fires that can damage various property**

- farmers for damage to agricultural production;
- skiing resorts, other tourism & sporting
- other

### What coverage periods?

a **range of available coverage periods** can be chosen by clients, **based on the time of the year when the non – normally high temperatures can damage their businesses**

# Temperature insurance – low heat

*brief terms & conditions*



What triggers an insurance event?



total number of heat units for all the days of coverage period does not exceed the threshold

What types of thresholds and parameters ?



**Minimum** and **Maximum** thresholds

temperature parameters:

1. heat unit base temperature
2. heat unit range minimum temperature
3. heat unit range maximum temperature

How to measure heat units?



number of heat units in one day is calculated by formula, using:

1. min temperature of the day
2. max temperature of the day
3. heat unit parameters

# Low heat insurance (contd.) claims issues



## How to assess claims?



- (i) calculate number of heat units for each day of coverage period
- (ii) total number of heat units
- (iii) compare to threshold

no need to assess individual claims of insured

## How much payouts?



**policy limit** when total number of heat units is below minimum threshold

**no payout** if total number of heat units is larger than maximum threshold

**proportional payout** if total number of heat units falls in the range between min and max thresholds.

## How long shall it take to pay claims?



**quick payments:**  
within 10 days from the expiry date set in Policy

# Low heat insurance (contd.)

## *payout example (unit heats use)*



### Policy terms:

**policy limit: 100%**

**thresholds:**

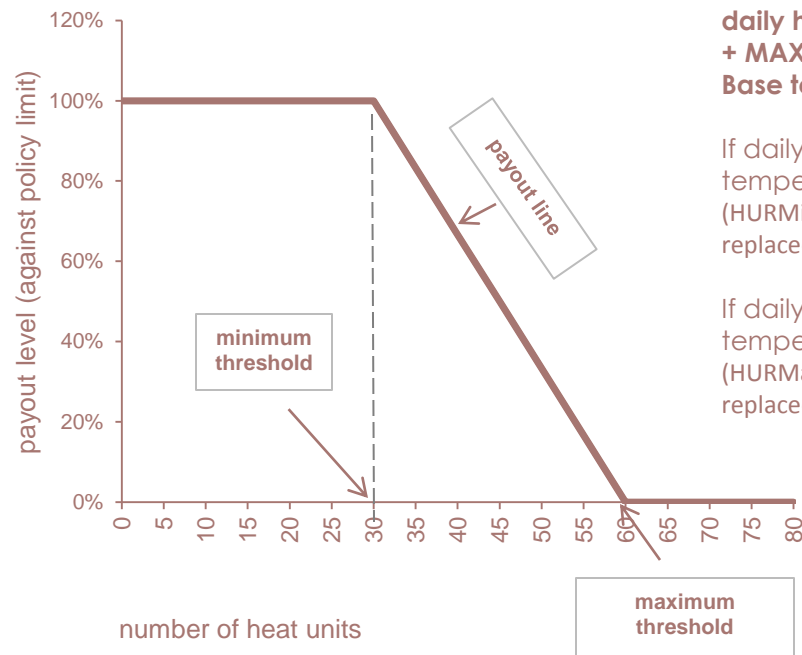
- min: 30 heat units
- max : 60 heat units

Heat Unit Range Minimum Temperature (HURMinT)	Heat Unit Range Maximum Temperature (HURMaxT)	Heat Unit Base Temperature
2	9	2

### **payout structure:**

- 100% payout if total number of heat units is below 30
- no payout if total number exceeds 60
- proportional payouts if total number is between 30 and 60.

Number of heat units	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
Payout	100%	100%	100%	100%	100%	100%	100%	83%	67%	50%	33%	17%	0	0	0



**Formula for daily heat units:**

**daily heat units = (MIN temp + MAX temp)/2 - Heat Unit Base temp**

If daily minimum temperature is less than (HURMinT), then it shall be replaced HURMinT in formula.

If daily maximum temperature is greater than (HURMaxT), then it shall be replaced HURMaxT in formula.

# Low heat insurance (contd.)

## *practical considerations*



### Product usage?

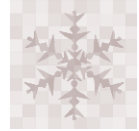
product shall finance losses due to negative effects of continuing low temperatures to crops that need a minimum level of heat over the period to grow normally.

### What coverage periods?

a range of available coverage periods can be chosen by clients, based on the time of the year when the non – normally low temperatures that continue over the period, can damage the crops

# Freeze insurance

*brief terms & conditions*



What triggers an insurance event?



event is triggered when temperature goes below temperature threshold (freeze temperature)

What types of thresholds?



one threshold – freeze temperature (eg. -2 celcius degree)

How to measure amount of precipitation?



daily **official measurement** by Authorized National Weather Service

# Freeze insurance (contd.)

## claims issues



### How to assess claims?



**number and position  
of freezing days  
within coverage  
period.**

**no need to assess  
individual claims of  
insured**

### How much payouts?



daily payouts (as  
percentage of policy limit)  
based on the position of  
the freezing day within  
coverage period (eg. for  
days within the first half of  
period - 20% of policy limit,  
for other days, 10% of limit.  
daily payouts continue till  
limit is reached.

**no payouts for non freezing  
days.**

### How long shall it take to pay claims?



**quick payments:**  
within 10 days from  
the expiry date set  
in Policy

# Freeze insurance (contd.)

## *practical considerations*



### Product usage?

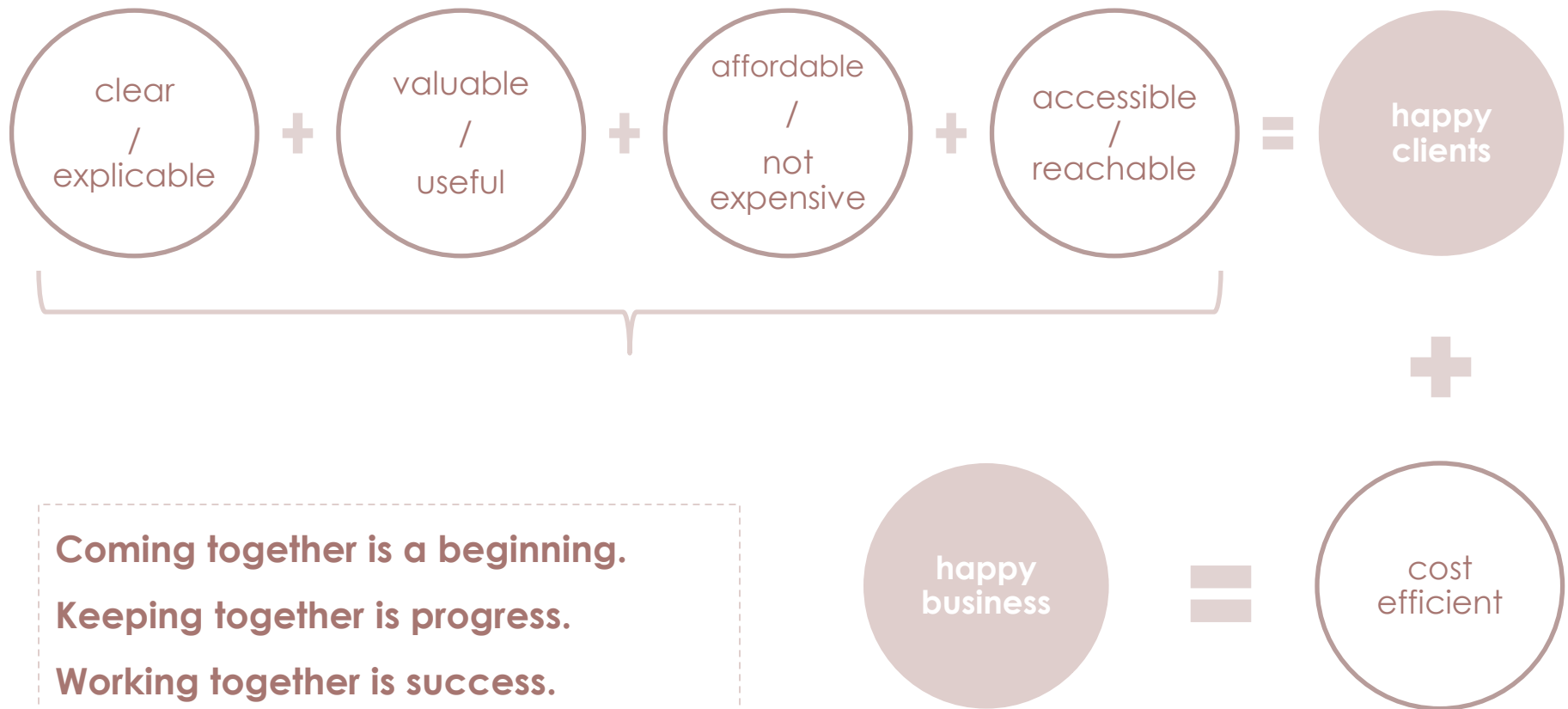
product shall **finance losses** due to **negative effects of freeze to:**

- farmers
- transportation
- other

### What coverage periods?

a **range of available coverage periods** can be chosen by clients, **based on the type of production** and its correlation with freeze event.

# We will work with you to tailor products and make:



Henry Ford