



Deutsches Komitee Katastrophenvorsorge e.V.
German Committee for Disaster Reduction
within the International Strategy for Disaster Reduction (ISDR)



Crisis Prevention and Early Warning – the German Experience



Forest Fire

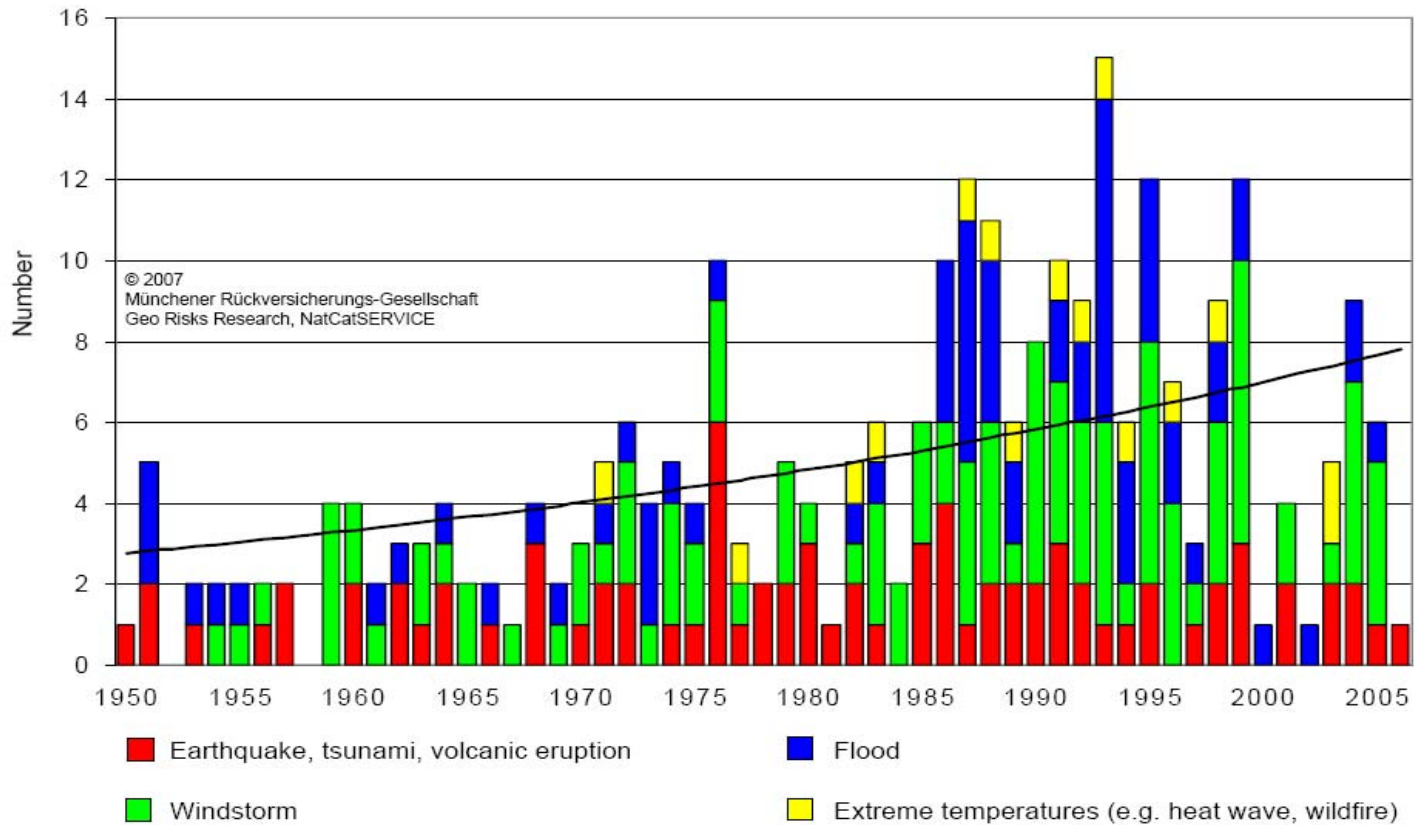
Towards Effective Disaster Risk Reduction
Cairo
22.-23. April 2009



NatCatSERVICE

Great natural disasters 1950 – 2006

Number of events

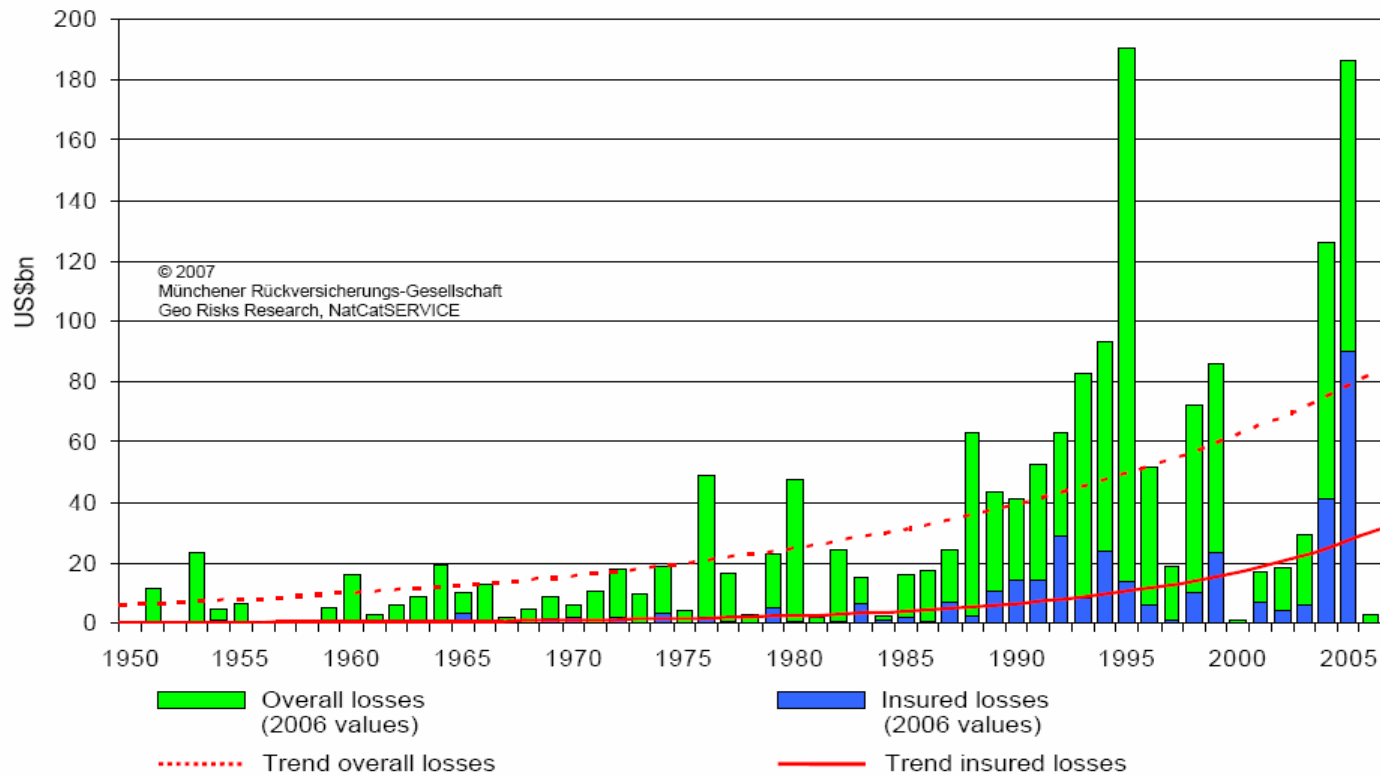




NatCatSERVICE

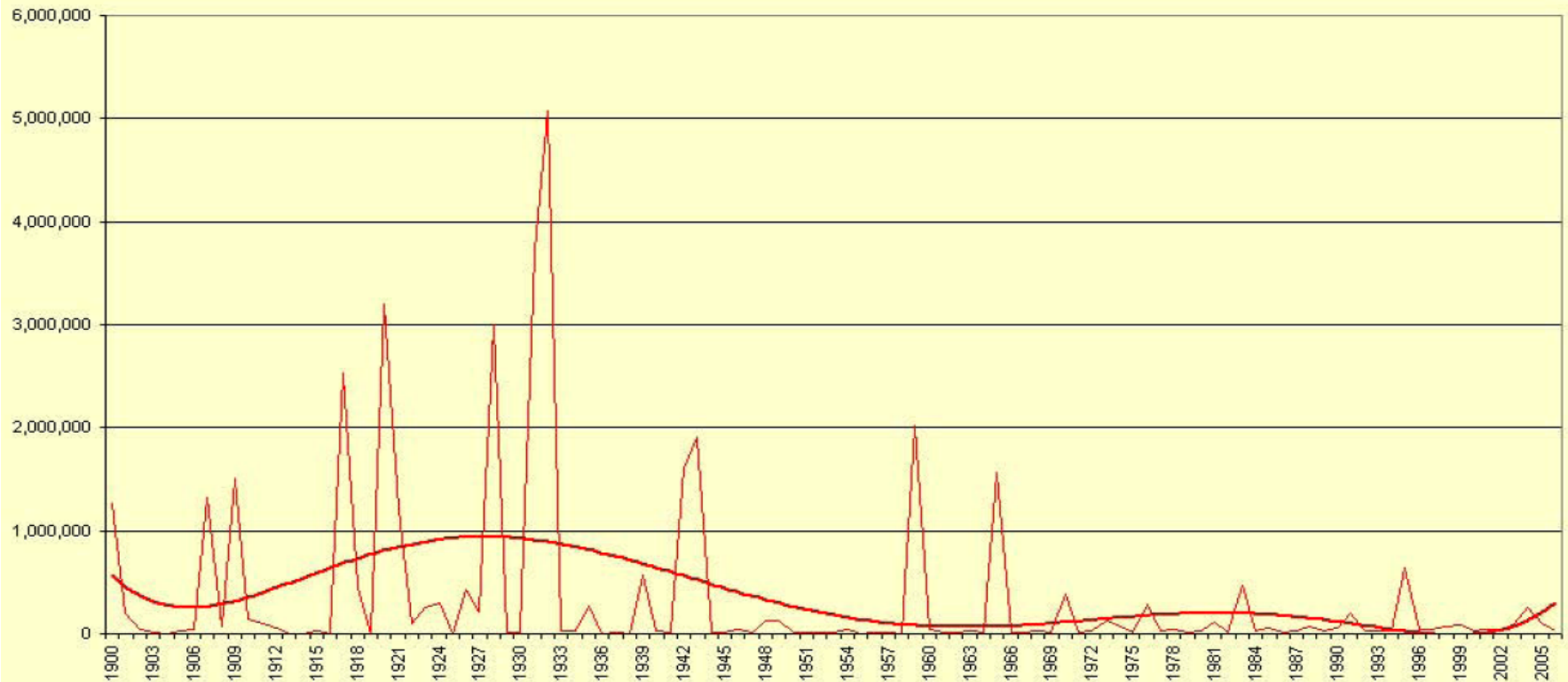
Great natural disasters 1950 – 2006

Overall and insured losses





Total number of people reported killed by disasters: 1900 - 2006

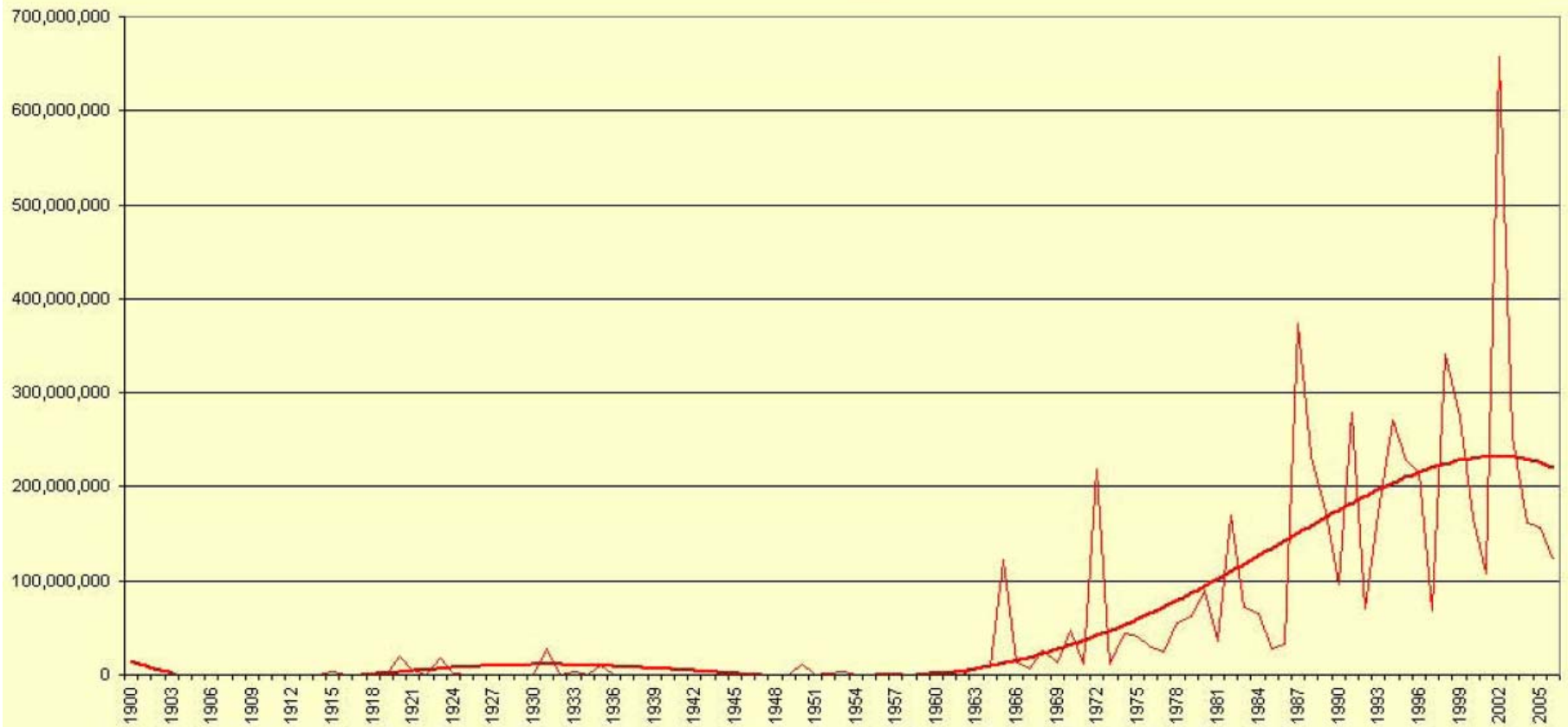


Equation for time trend-line : $y = 0.0003x^6 - 0.0919x^5 + 11.684x^4 - 687.31x^3 + 17997x^2 - 161530x + 709396$; $R^2 = 0.13$

Source : "EM-DAT : The OFDA/CRED International Disaster Database; www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"



Total number of people reported affected by disasters: 1900 - 2006



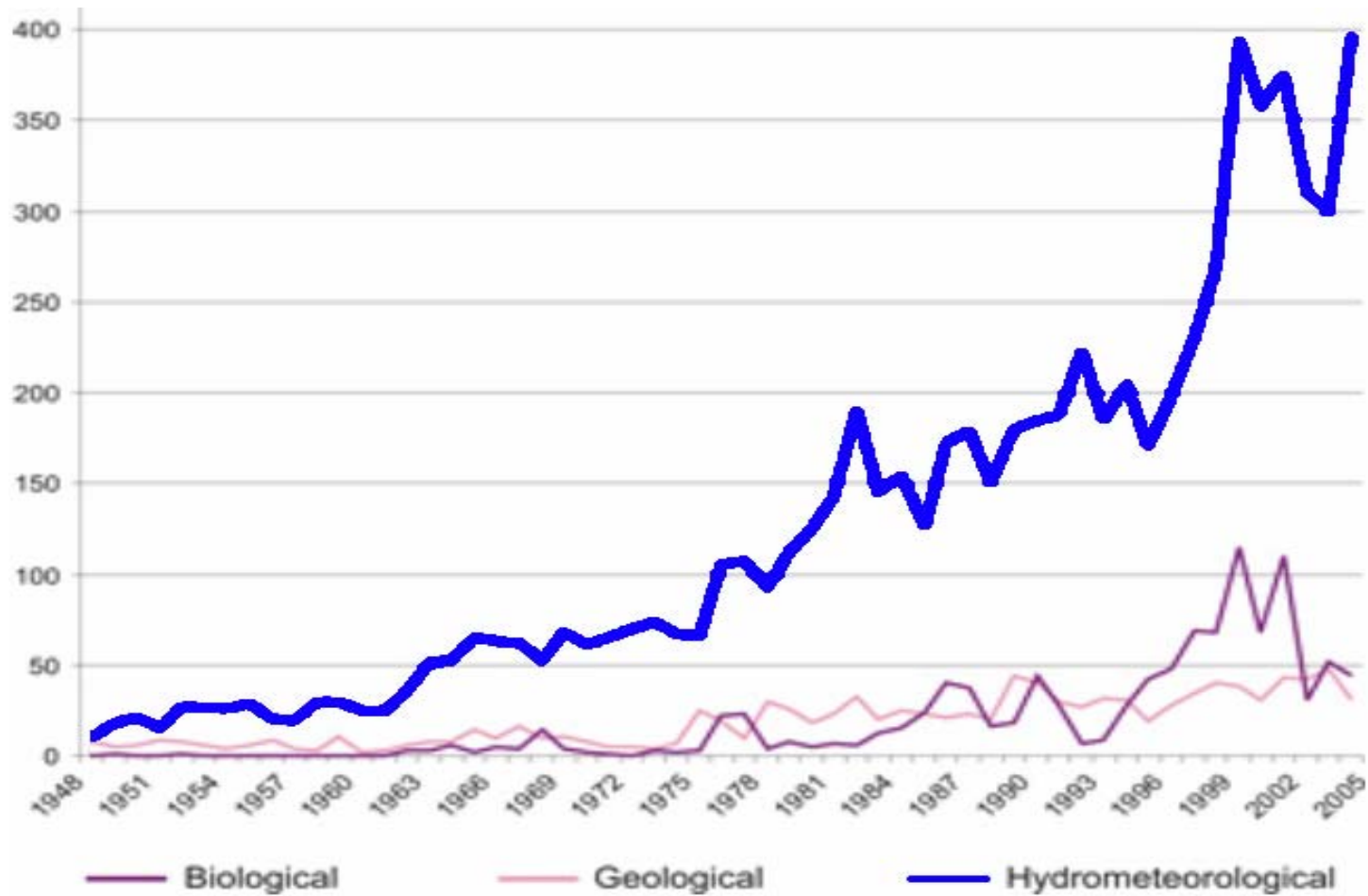
Equation for time trend-line : $y = -0.7614x^5 + 183.86x^4 - 15940x^3 + 546850x^2 - 7E+06x + 2E+07$; $R^2 = 0.6108$

Source : "EM-DAT : The OFDA/CRED International Disaster Database; www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"



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Weather related disasters are causing

- 75% of „natural“ disasters
- 45% of the fatalities
- 80% of the economic damages



Cartoon by [Chris Britt/SJ-R](#)



Major Disasters in Germany

Floods

Rhine Floods (1993, 1995)

Oder Flood (1997)

Elbe Flood (2002)

Wind Storms

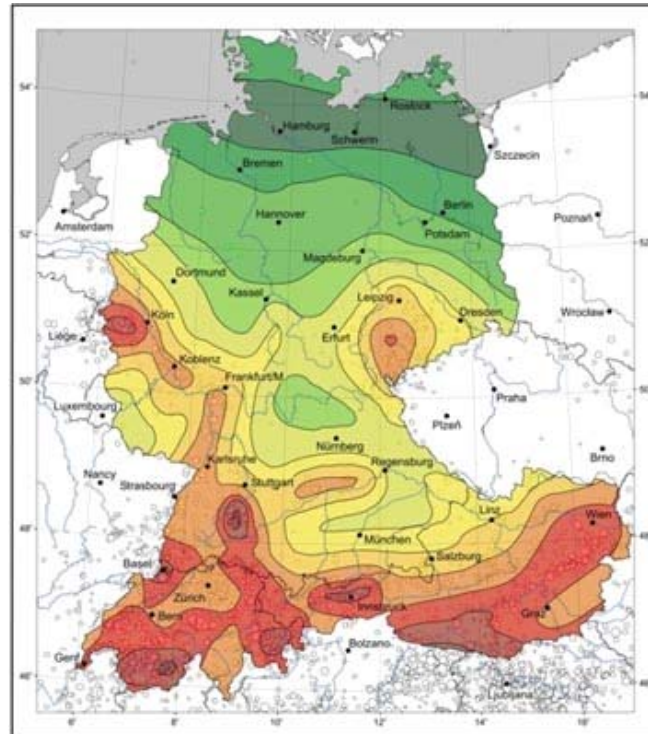
Lothar (1999)

Kyrill (2007)



Disaster (risk) reduction

- The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.





Disaster (risk) reduction

Risk analysis (hazard assessment, vulnerability analysis, risk assessment)

Technical measures (building norms)

Non-technical measures (land use planning, urban planning, insurance, appropriate land-use)



Bridges to cross – points of contact ?

For a good communication about Disaster Risk Reduction:

- All stakeholders have to take part in the dialogue
- *Before, during and after disasters*



Communication is the key to transform
risk perception into risk awareness
and action



- European level

Cooperation and harmonisation.

- National level

Prevention, preparedness and response are mutually important.

The weakest ring defines the performance of the whole DRR chain.

- Local level

Adaptation to climate change and increasing values at risk.

Efficient coping mechanisms become more and more important.



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German Committee for Disaster Reduction (DKKV)

- Founded in 2000 as follow up arrangement of the German IDNDR Committee
- Non governmental organisation
- Non profit association
- Headquarter in Bonn



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Members of DKKV are:

- Development and humanitarian aid organisations and NGO's
- Civil protection organisations
- Scientific institutions
- Media
- Insurance companies
- Governmental agencies



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Networks like:

- GDV (Association of insurance companies in Germany)
- VENRO (Association of German development non governmental organisations)
- Helmholtz-Community

are members of DKKV



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The members of the DKKV and the board members work on a voluntary basis

They are elected on a three years turn



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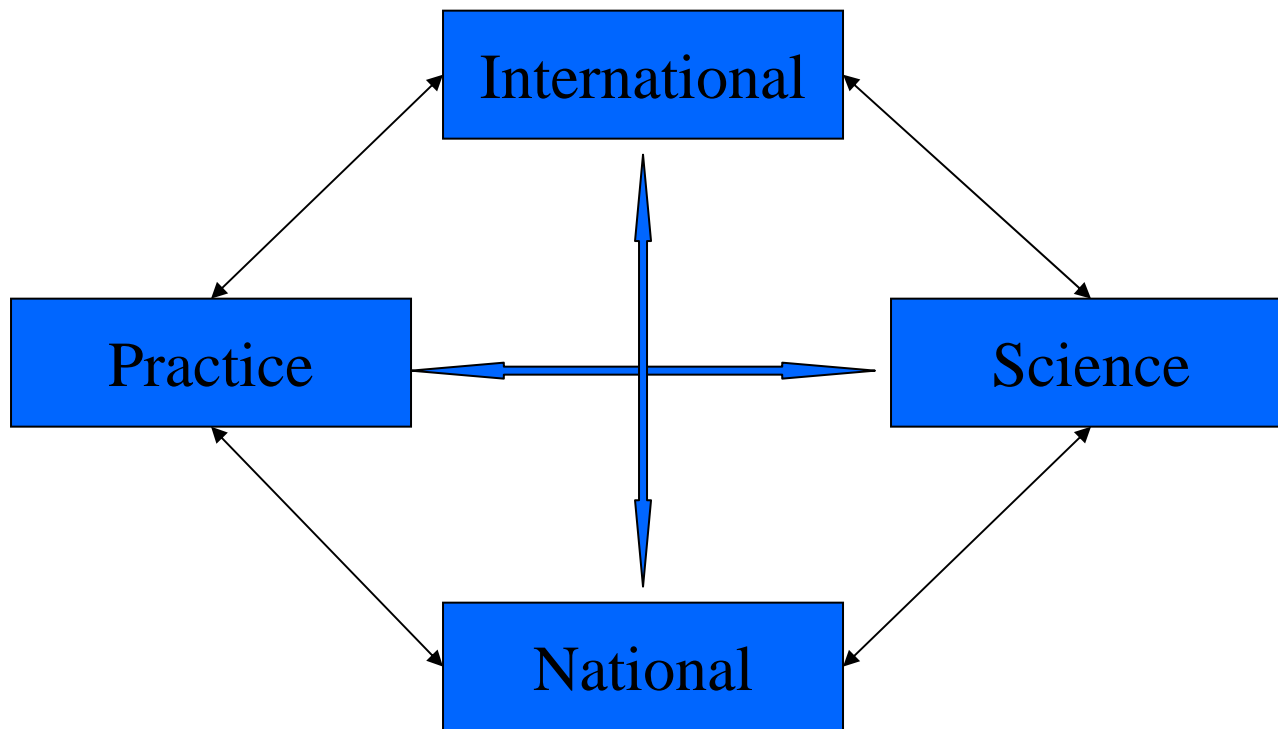
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Guiding principle:

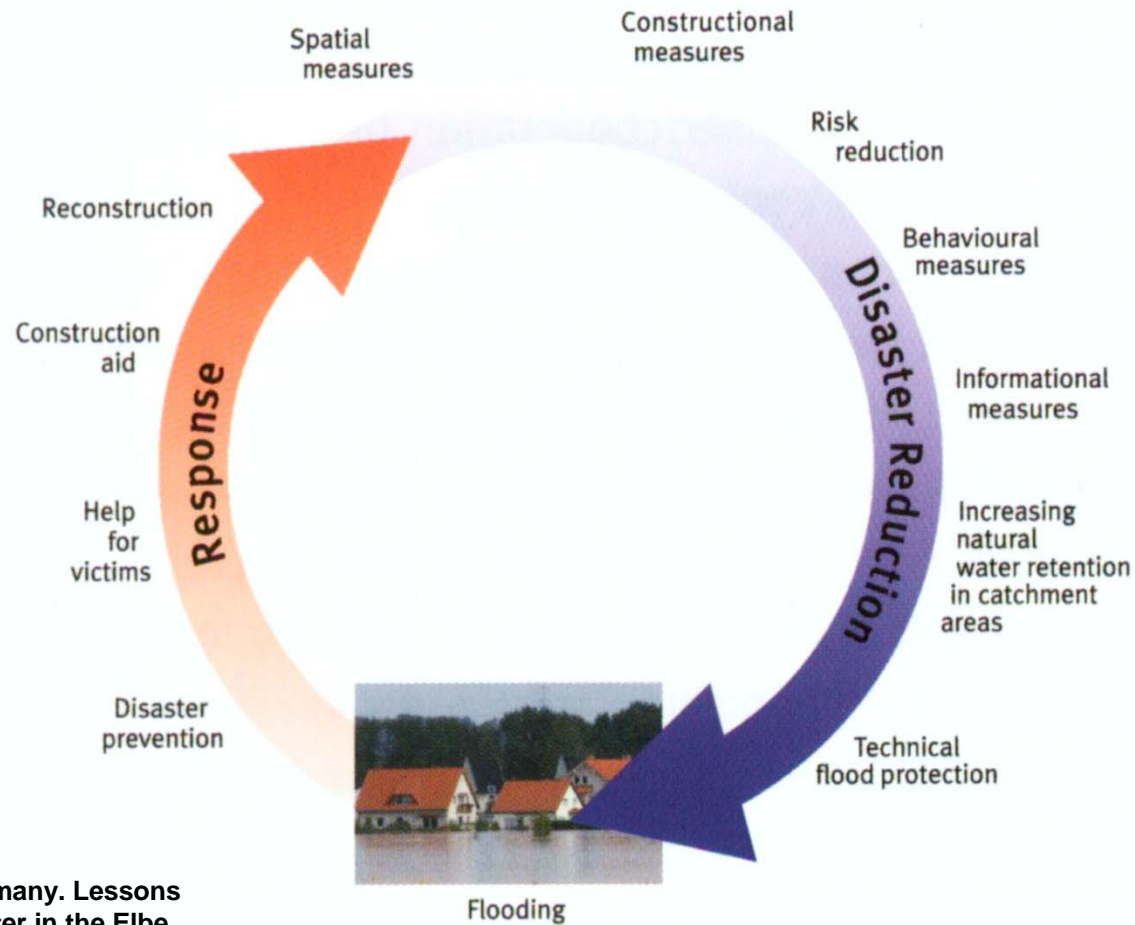
The German Committee for Disaster Reduction regards itself as responsible for firmly establishing disaster reduction in the awareness and actions of policy-makers, industry and administration. The aim is to render society capable of dealing with the risk of disasters and to prevent human, social, economic and ecological losses.





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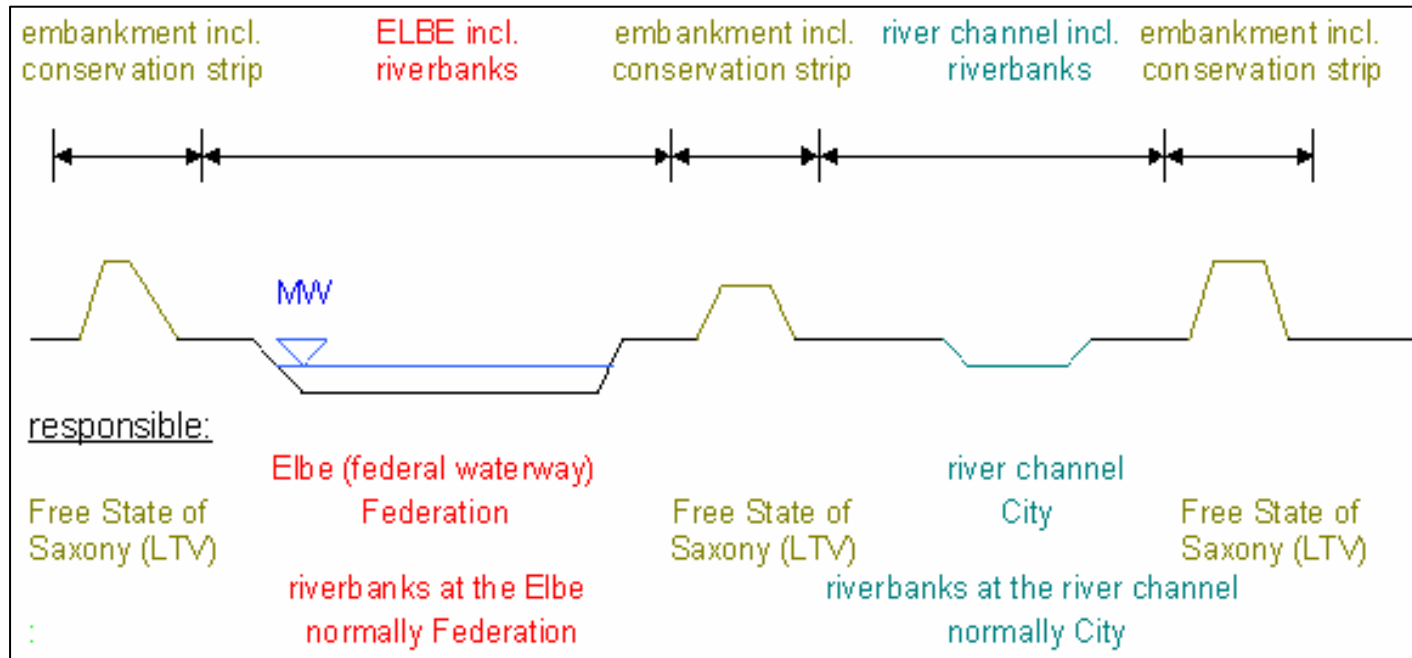


Source:
Flood Risk Reduction in Germany. Lessons
Learned from the 2002 Disaster in the Elbe
Region. DKKV Publication 29e, 2004.



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The German rescue force

Organisation	No. of units	Members vocational	Active voluntary members	Young voluntary members
Voluntary fire brigades ¹	21.033	-	1.042.435	-
Youth fire brigades ¹	17.608			254.593
Vocational Fire Brigades ¹	101	28.056	-	-
Works Fire Brigades ¹	896	31.259	-	-
ASB	316	3.147	5.265 ² / 1.066 ³	
DLRG	949		8.615	
DRK ²	4.774	400.000	219.000	108.000
JUH	353	10.333	6.476	
MHD	982	19	25.085	8.915
THW	2.459	800	80.000	15.398
Total			1.308.636	386.906

1) 2005 Statistic 2) No official statistic 3) Conscientious objectors



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Extreme Weather Events

The German Weather Service

Legal obligation to issue official warnings



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Extreme Weather Events

Warning System with three pillars:

- **Early information on a weekly basis**
- **Warning Reports for 24h**
- **Early Warning on district level**



River Commissions/Flood Warnings

Convention on the Protection of the Rhine

The Convention on the Protection on the Rhine is the basis for international cooperation for the protection of the Rhine within the ICPR. It was signed on 12 April 1999 by representatives of the governments of the five Rhine bordering countries: France, Germany, Luxembourg, Netherlands and Switzerland and by the European Community.

Among other objectives, the preservation, improvement and sustainable development of the Rhine ecosystem are central elements of the convention. This target was fixed against the background that the Rhine is an important European navigation lane.



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Convention on the Protection of the Rhine

- Flood prevention
- Technical flood protection measures
- Flood Forecasting and announcement



Rhine 2020“ – balance for the fields of flood prevention and protection (1995-2005) – Action Plan on Floods

During the last 10 years, great efforts were made towards improving flood prevention and protection in the Rhine area.

Almost all measures planned until 2005 have been implemented effectively and successfully at the costs estimated. As compared to 1995, damage risks were reduced and additional retention volume has been created along the Rhine. However, the water retention measures implemented have not been able to achieve the target of reducing extreme flood peaks by 30 cm in all sections of the Rhine. As the width of the river diminishes downstream, effectiveness of retention measures is reduced.

The objective to double forecasting times along the different sections of the Rhine by 2005 has been completely achieved, but reliability is not the same as before. Early, prompt and long term flood announcement is of great importance in order to be able to avoid flood damages.

Guatemala

Awareness raising
Information
Capacity Building
Technical assistance and
Participatory approach

Were key to positive results

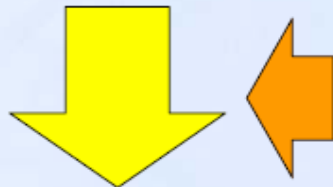




Human loss *has been reduced dramatically* (Case of Bangladesh)

1991 Cyclone in Bangladesh

Maximum Wind Speed: 225km/hr
Number of Death: **138,882**



- Accurate and timely forecasting system
- Adequate proper warning dissemination operation
- Social mobilization and awareness raising
- Proper coordination among government agencies

1997 Cyclone in Bangladesh

Maximum Wind Speed: 220km/hr
Number of Death: **134**



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Conclusion

Disaster Risk Reduction is a cross cutting issue

A cross cutting approach is needed



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Conclusion

Disasters do not stop at borders

Cross border cooperation is needed



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Conclusion

Disasters pose a threat to sustainable development

Disaster Risk Reduction needs to become an integral component of any development decision and development cooperation



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Conclusions

Risk is highly dynamic

Global Change with its different aspects contributes to the dynamic development of risk



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Conclusions

Risk assessment is essential for the design of any Early Warning System

The Early Warning System will only function if the whole chain is in place



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Conclusions

Reliability of the Warning is crucial for the success

A single-Voice principle is indispensable for Early Warning Systems



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Conclusions

An Early Warning System needs to be adapted to the technical capacities which exist

To bring the message to the people is the first mile and not the last mile



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Conclusion

Disasters are far and foremost failures in development.

UNDP, Reducing Disaster Risk a Challenge for Development, 2002



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Thank you for your attention !