



# Water, Risks, Transformation and Adaptation in the Mekong Delta – A approach of the WISDOM Project

FLORIAN MODER

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Federal Ministry  
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and Research



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GFA  
Consulting Group

adpc



# Topics of the WISDOM Project

## Knowledge and Livelihoods

water pollution, pesticide modeling, endocrine disruptor research, analyses of ethnic composition in the Delta, coping capacities of people, villages, communities

## Knowledge Management

assessment of the research landscape, administrative and political landscape in Vietnam, which is relevant for the water sector; linkage of institutes and institutions, data sharing

## Resources and Water Quality

research in the field of hydrologic and hydraulic modeling, water quality, water availability and flooding

## Data Integration Remote Sensing

integration of all data within the project including geospatial vector and raster data, reports, statistics, insitu measurements etc. and remote sensing products

## Information System Design

Architecture conceptual design (including software analyses, database design, -access, and -query setup, data processing, information retrieval

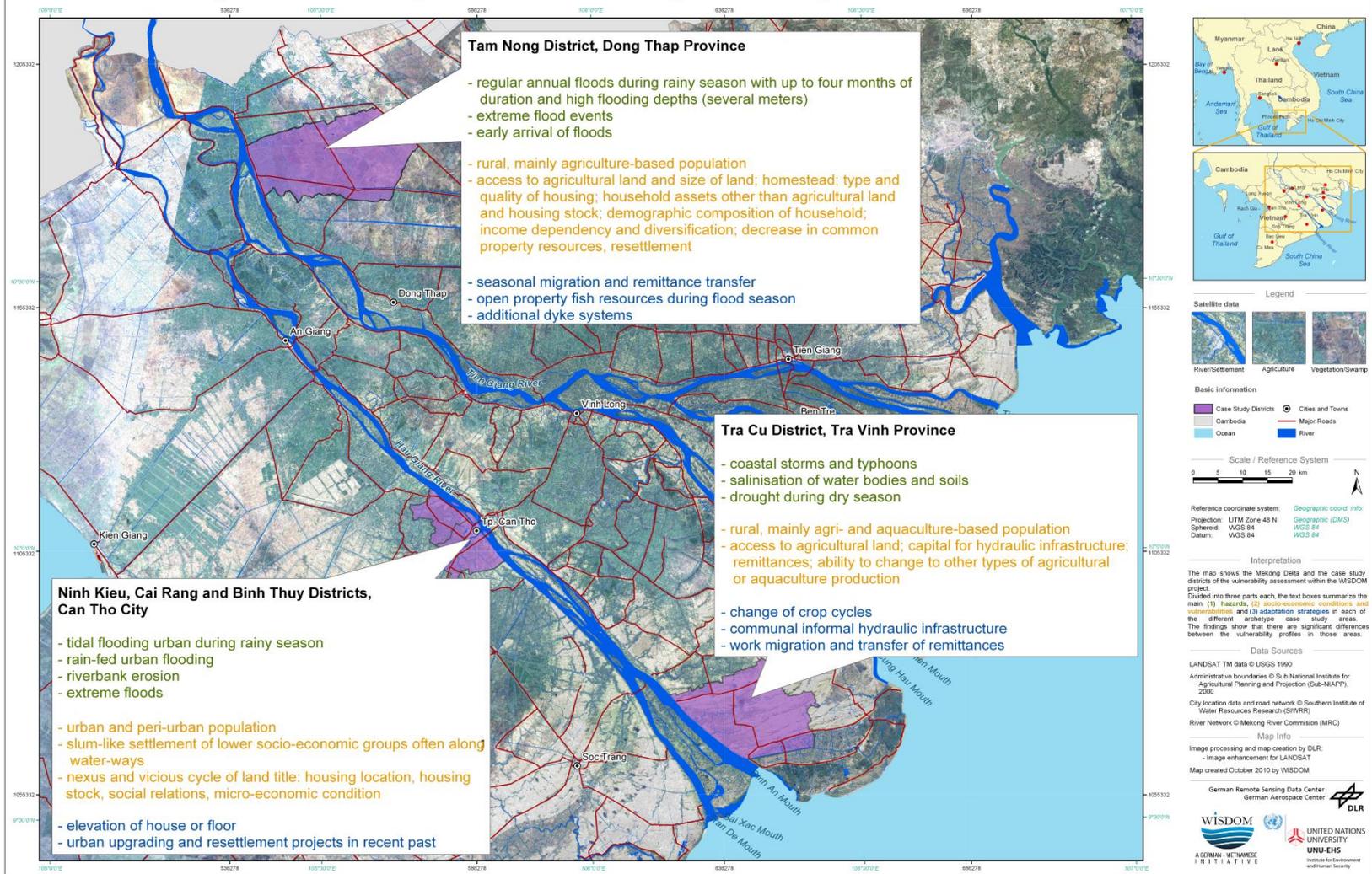
# Guiding Key Questions (WP 5000)

- How to assess water related flood risks under changing climate conditions in the Mekong Delta (for urban, rural and coastal areas)?
- How to develop effective adaptation strategies to water related hazards addressing the most pressing vulnerabilities of communities exposed to floods, salinisation and sea-level rise?
- What are key water related socio-economic transformation processes and livelihood changes due to environmental, economic and societal changes and how do those shape new water-related risks?

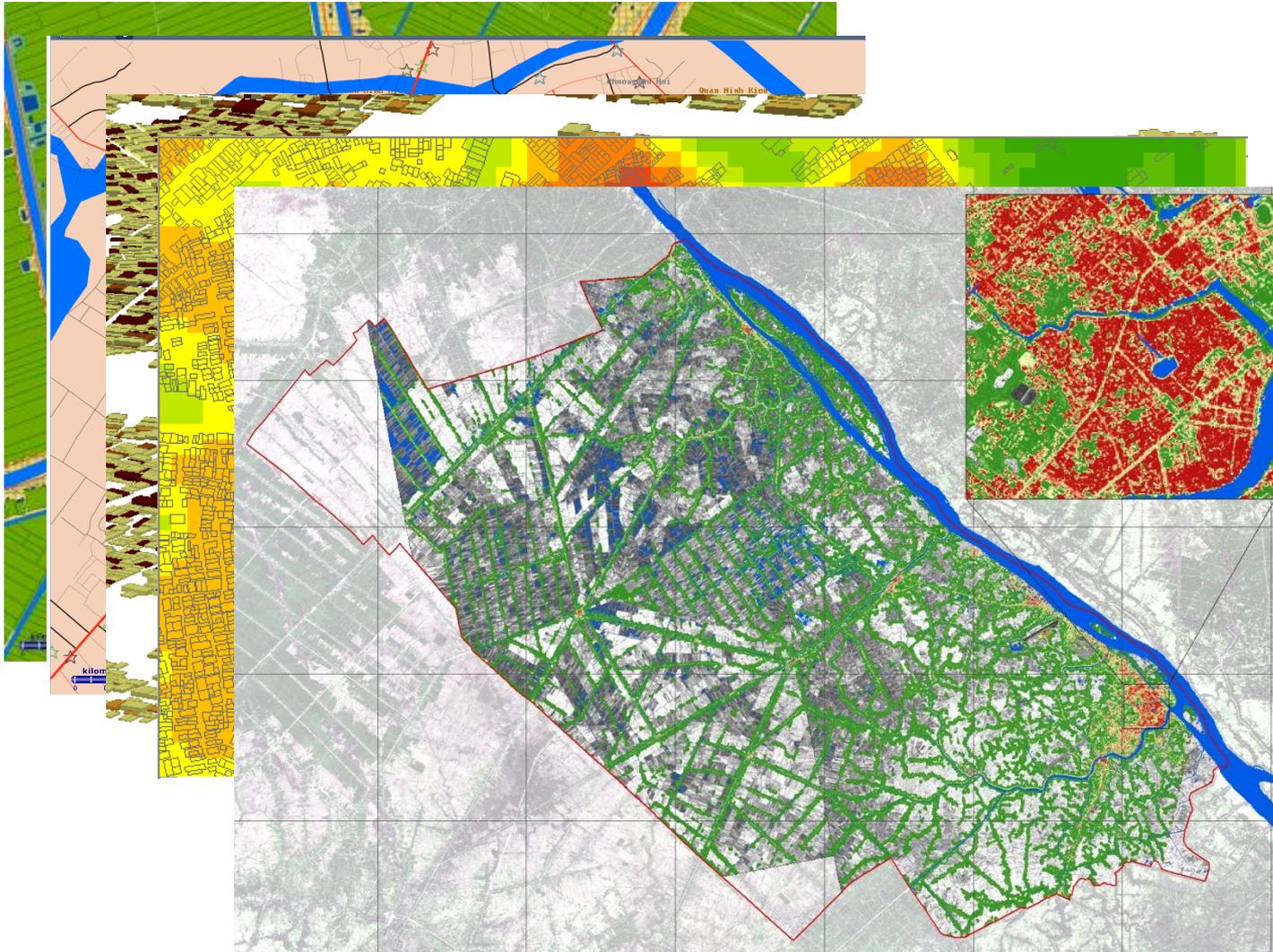


# Vulnerability Assessment

## Vietnam - Mekong Delta - Case Study Areas and Main Findings Vulnerability Assessment WISDOM



# Urban Structure Assessment and Physical Vulnerability Mapping (DLR-DFD)



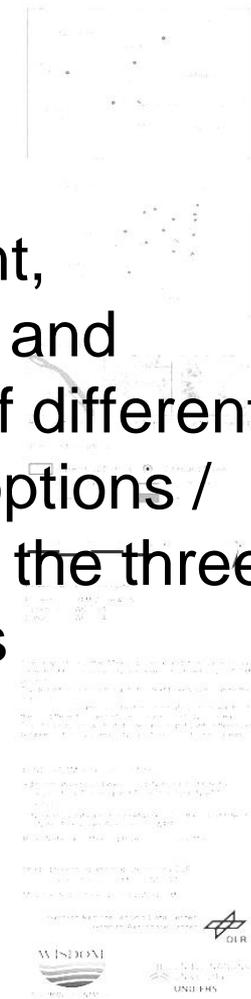
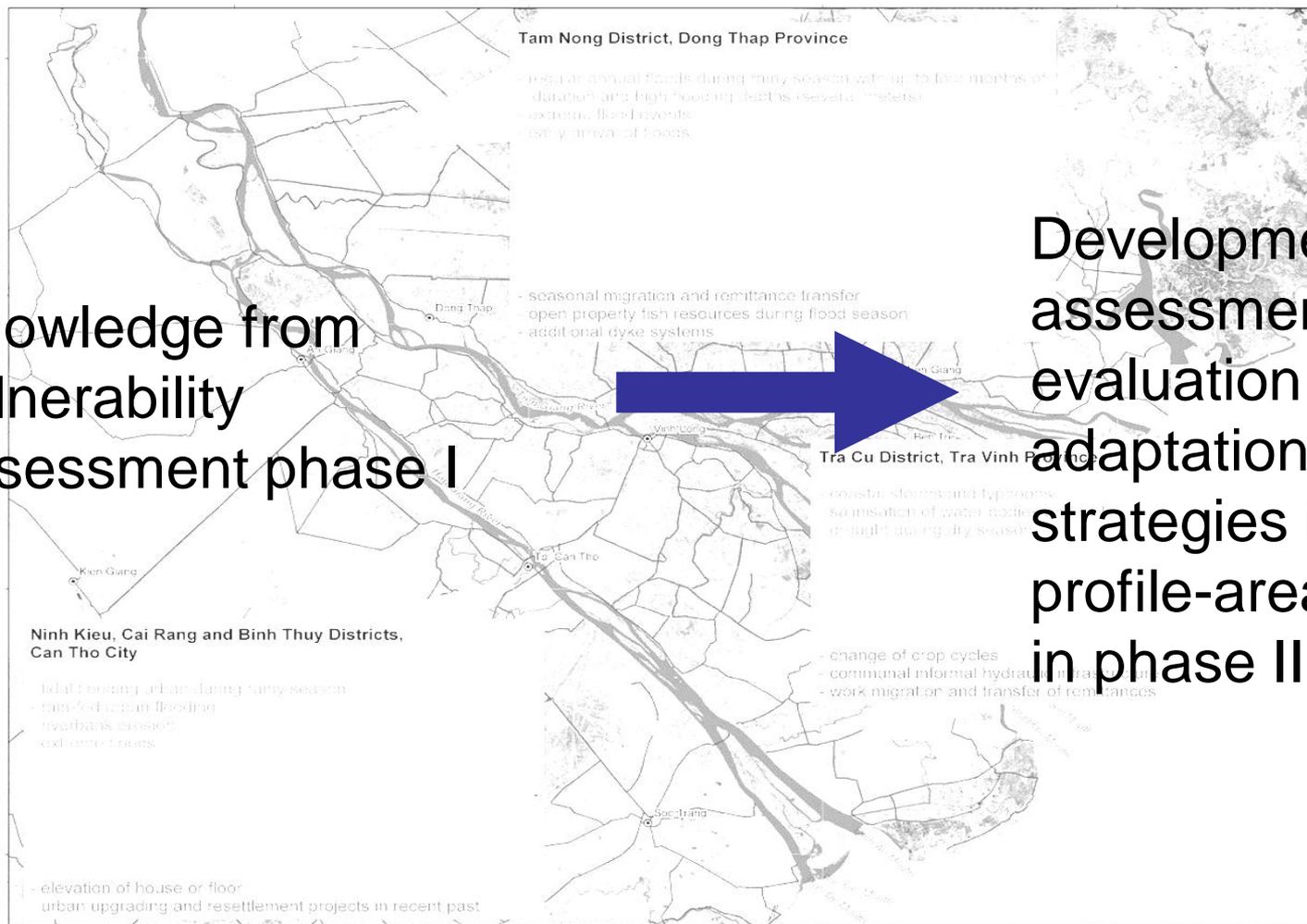
Source: DLR 2010

# From Vulnerability to Adaptation Strategies (UNU)

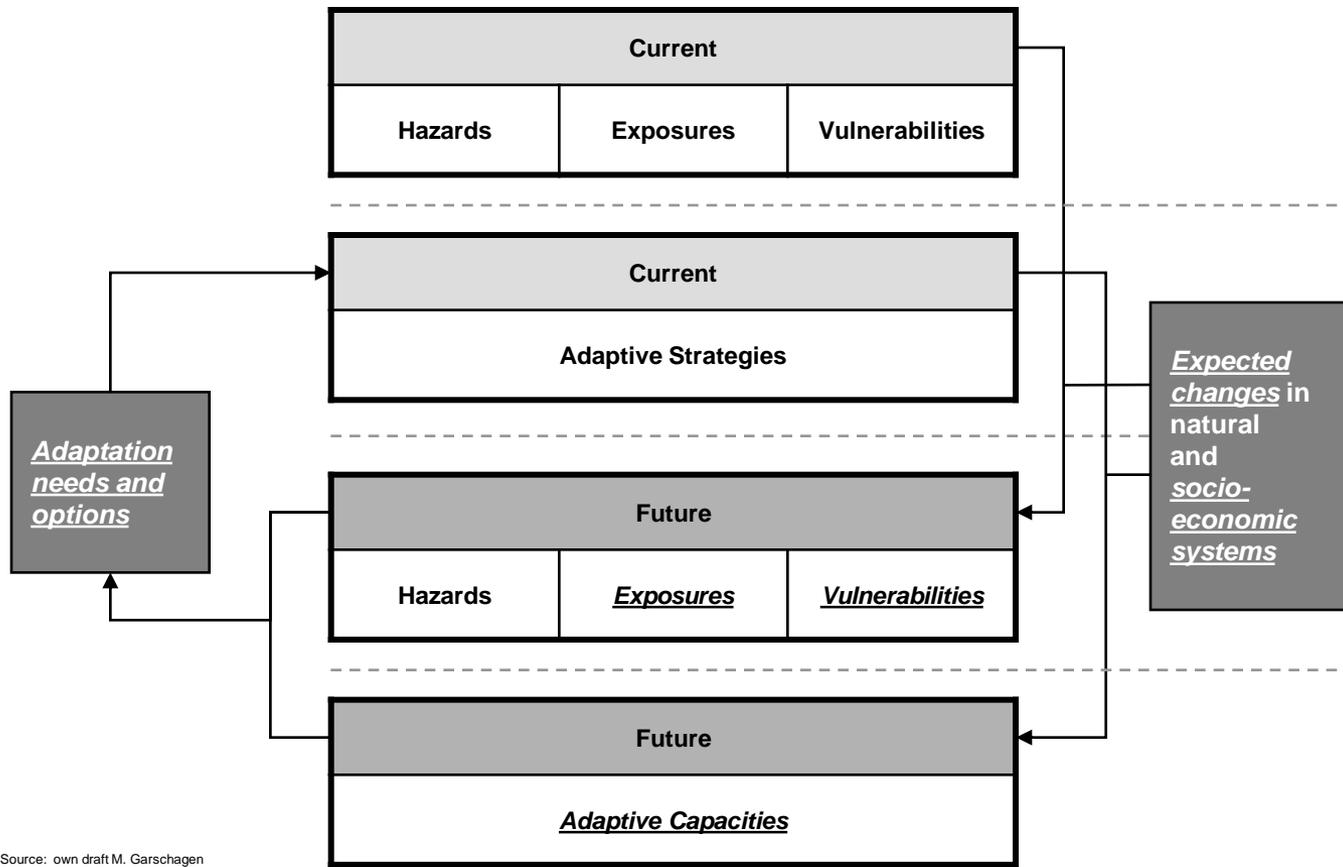
## Vietnam - Mekong Delta - Case Study Areas and Main Findings Vulnerability Assessment WISDOM

Knowledge from vulnerability assessment phase I

Development, assessment and evaluation of different adaptation options / strategies in the three profile-areas in phase II



# Vulnerability Assessment



Source: own draft M. Garschagen  
adapted from Smit & Wandel (2006)

# Development of adaptation plans and strategies (UNU)

Review of envisaged official adaptation policies and legislation targeting vulnerable households in Vietnam

Review and analysis of coping and adaptation strategies in other countries with similar hazard-settings

Development of quality criteria for coping and adaptation measures in Vietnam and particularly in different settings (rural vs. urban; coastal vs. inland etc.) in the Mekong Delta

Development of catalogue of recommended coping and adaptation strategies and measures for different risk profiles in the Mekong Delta

Integration of adaptation catalogue into the information system

Promoting developed adaptation strategies and measures for households and municipalities in two workshops in Can Tho

# Analysis of measures and tools that help to promote these adaptation strategies and goals (UNU)

Stakeholder analysis for scoping of potential of formal and informal measures to support implementation of adaptation strategies



Development of supportive implementation measures and tools



Promotion of developed measures and tools in stakeholder workshop and participatory training

# Identification of Coping and Adaptation Options of Vulnerable Households (UNU)

## Analysis of

- current coping modes (formal and informal) at household level
- long-term risk awareness and envisaged adaptation strategies (formal and informal) at household level
- current coping modes amongst local governmental agencies in different settings (case study sites)
- long-term risk awareness and envisaged adaptation strategies amongst local governmental agencies in different settings (case study sites)



Source: M. Garschagen

# Ecosystem transformation, changing livelihood, vulnerability and adaptation in coastal areas (UNU)

- Coastal areas as hot-spots of overlapping transformation and climate change risk
- Bringing together methodologies and experiences of activities within the work-packages
- Development of future vulnerability scenarios and pathways
- Development and evaluation of adaptation options



Source: M. Garschagen

Basin characteristics  
EO based Monitoring

# Results of Research:

Water Quality, Pollution

Analyses of Legal  
System

Water quantity,  
demand, reliability

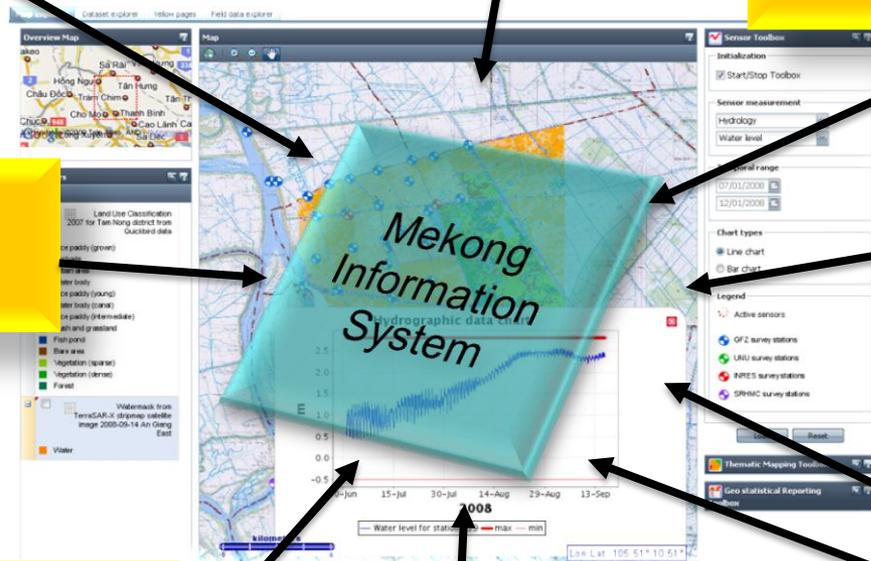
Institutional  
Mapping

Climate Change and  
Vulnerability Analyses

Training, CB

Socio Economic Changes

Landuse Change



# Thank You

<http://www.wisdom.caf.dlr.de>



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