



# Heritage Impact Assessment

## Some Cases and Examples

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1. WHY? Heritage Impact Assessments (HIAs) – Reasons for assessments
2. HOW? Our Methodology in compiling HIAs
3. CASE STUDIES related to the following specific questions:
  - **Timing:** Case 1\_“VIS Dresden Elbe Valley”
  - **Planning and Governance:** Case 2\_HIA Tunnel Entrances “Upper Middle Rhine Valley”
  - **OUV:** Case 3\_“HIA Gallery Lower Austria” / Wachau Cultural Landscape”
4. CONCLUSION: Tasks for education and research

# Content





1

# Heritage Impact Assessments Reasons for application





Climate change



Socio-economic transformations



Research on cultural heritage



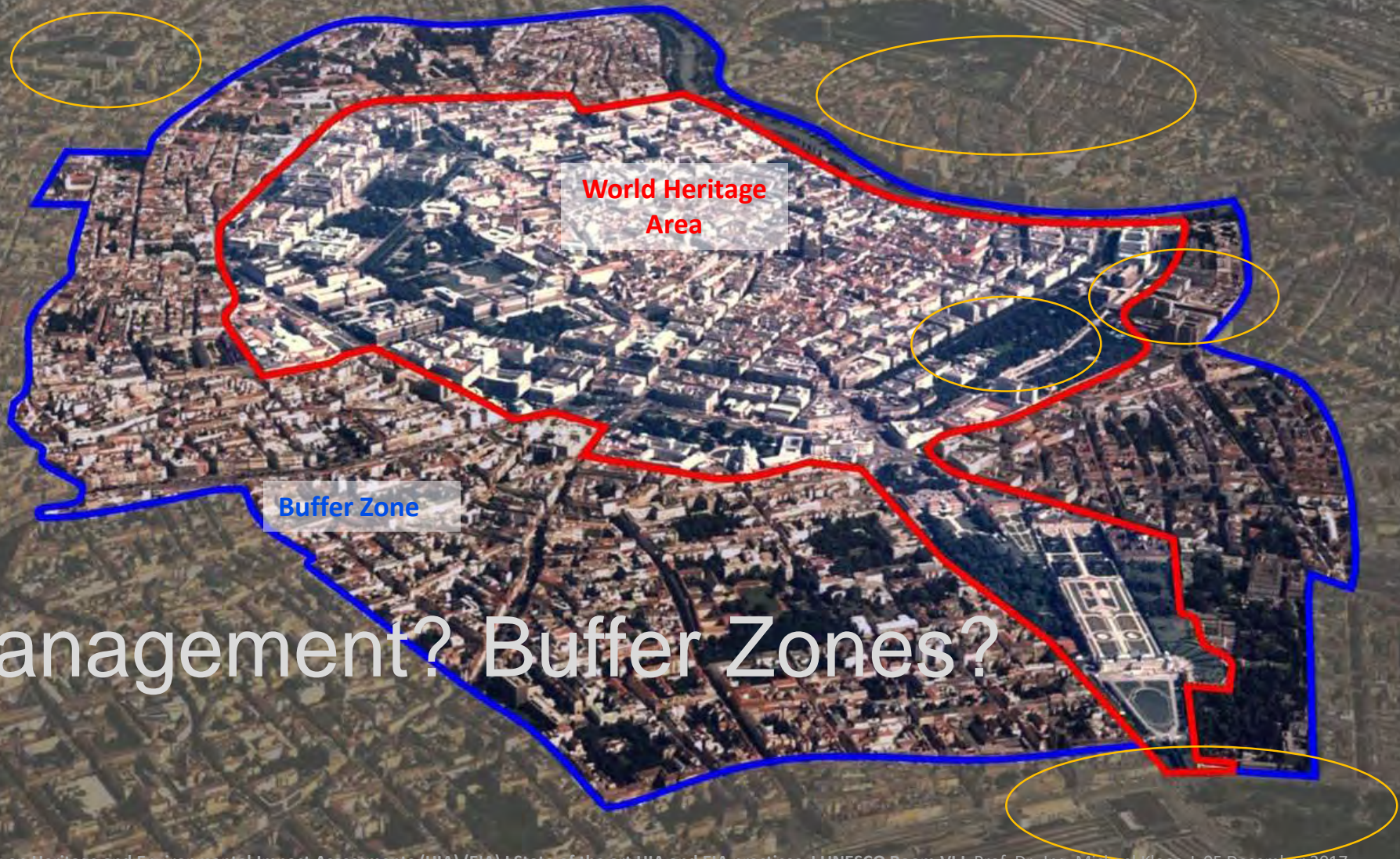
Environmental threats

# Reasons for Heritage Impact Assessment – Risks (some examples)



# World Heritage site “Historic Center of Vienna”

© Magistrat Wien



## Management? Buffer Zones?





# Buildings and Development





Süleymaniye  
Mosque



Golden Horn  
Metro Bridge

# Growth / Transportation Infrastructure?

*HIA: Golden Horn Metro Bridge Istanbul / Turkey*

*Compilation: 2010-11*

*Client: Istanbul Metropolitan Municipality*





# Service Infrastructure?

*HIA: Wind Turbines in Wiesbaden / Germany*

*Compilation: 2013*

*Client: Municipality of Wiesbaden*



## e. g. Management Problems

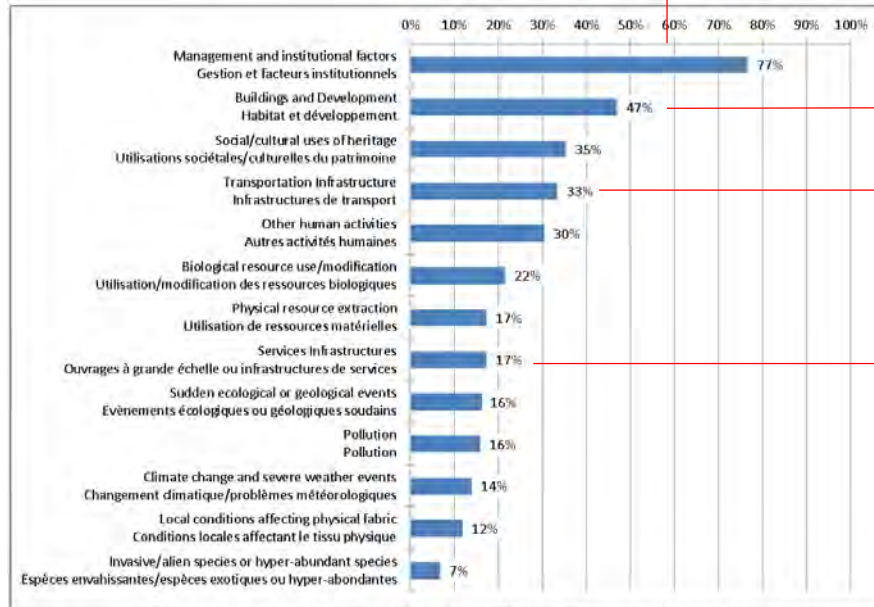
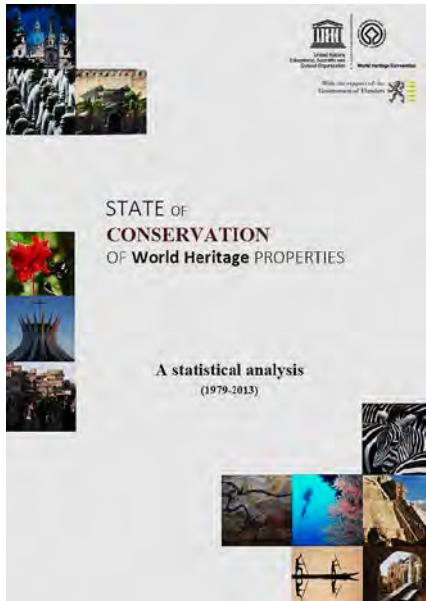


Chart 10: Percentage of properties affected by each of the 13 primary factors between 1979 and 2013



# SOC-Analysis (2013): Indicated Agents of Change (Cultural properties)



e. g. Management Problems

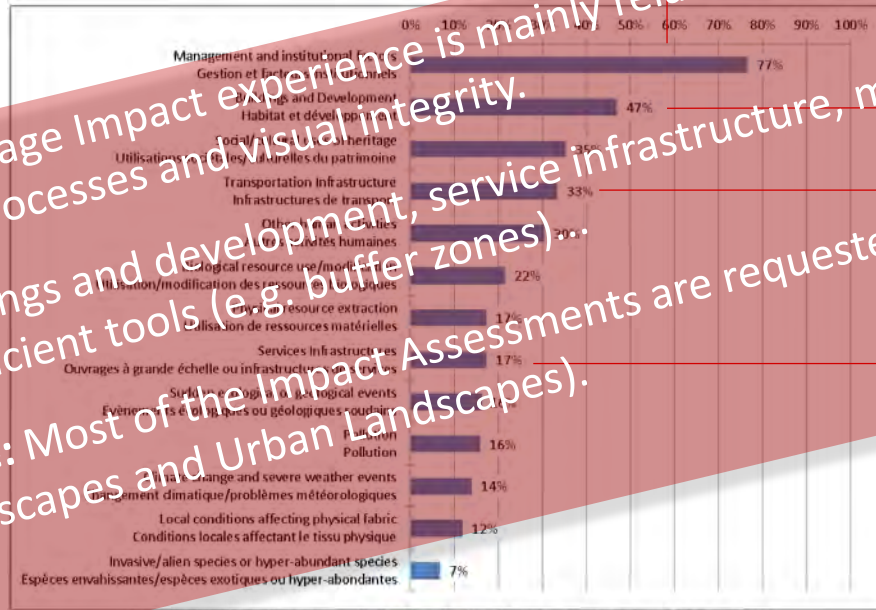
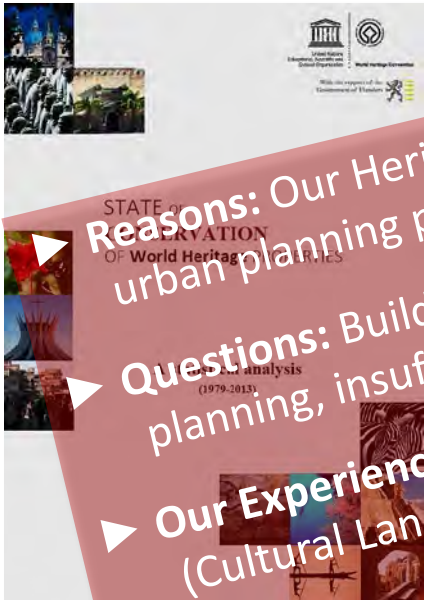
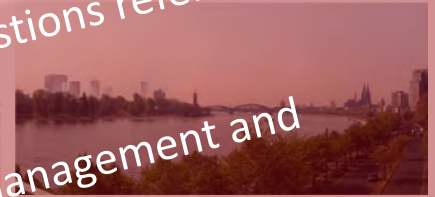


Chart 10: Percentage of properties affected by each of the 13 primary factors between 1979 and 2013



# Conclusion 1: Reasons for application









# Case 1: VIS Bay of Kotor

*Place:* Cultural and Natural Region of Kotor (1979)

*Compilation:* 2009

*Client:* GTZ Project Office Montenegro, Ministry of Culture, Montenegro

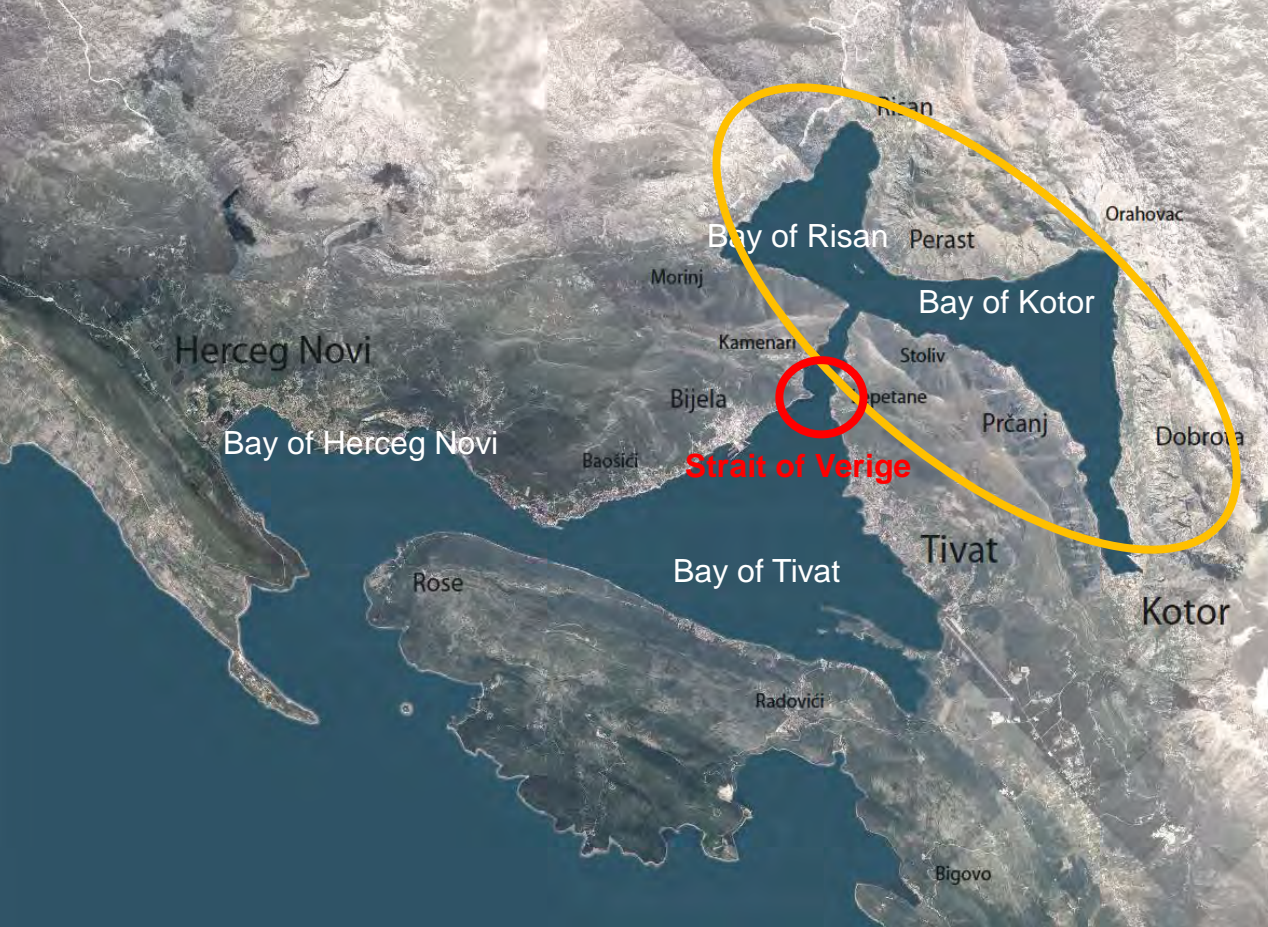




# Future State?

- New expressway between Croatia, Montenegro and Albania
- Replacement of the ferry service ...





# Cultural Landscape Bay of Kotor (Mixed Site)





# S1: 3D-Model





## S2: OUV / Attributes

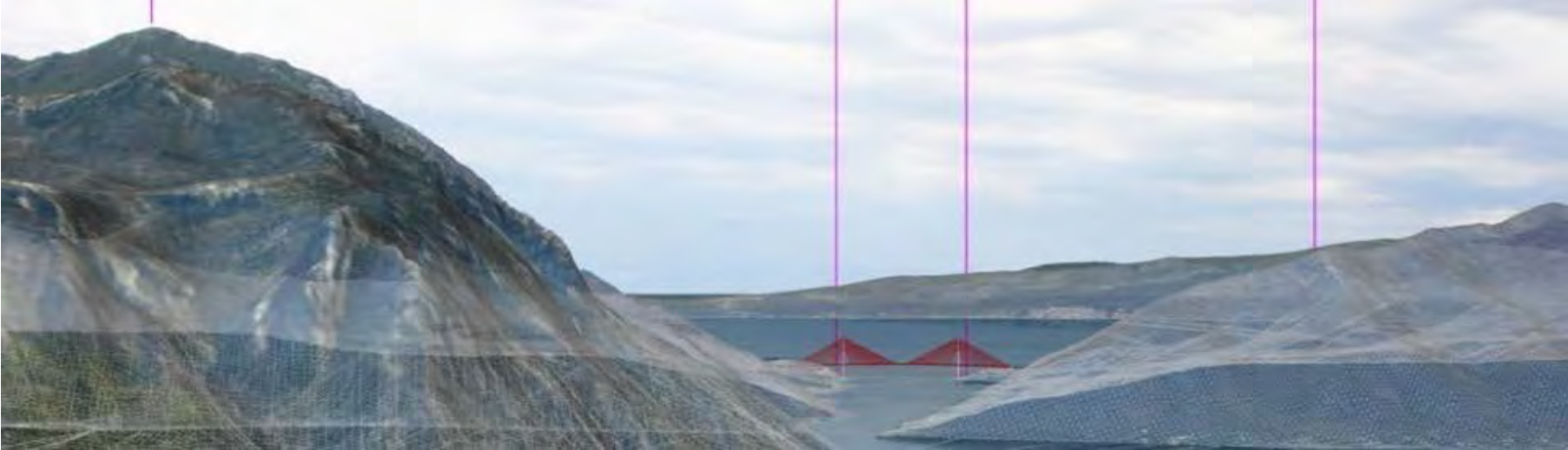
### Analysis of natural-/ cultural-values



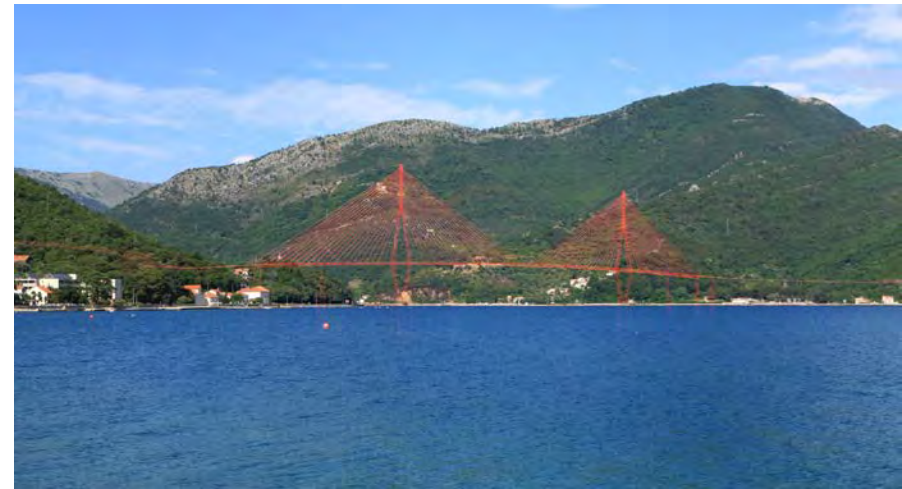
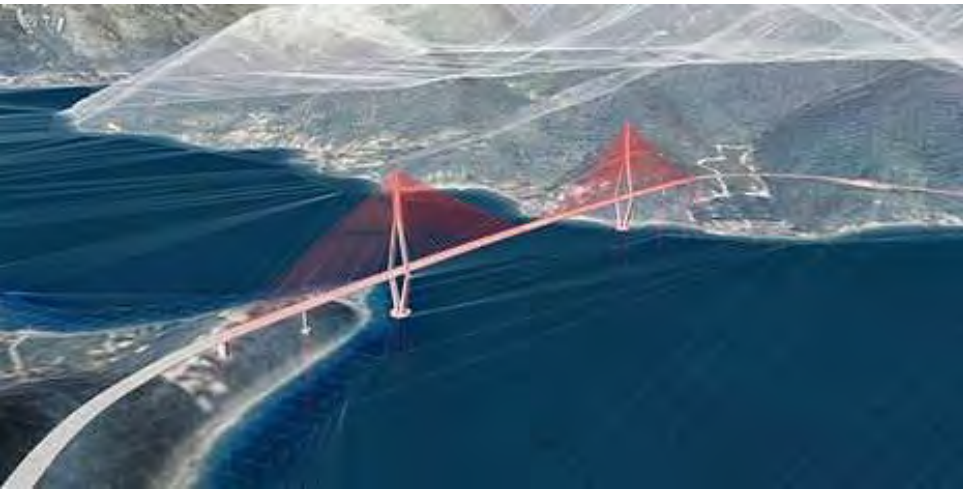


# S3: Documentation





©„vis bay of kotor“, montenegro“



# S4: Visualization





# S5: Assessment





# S5: Assessment



VALUE OF HERITAGE ASSET	SCALE AND SEVERITY OF CHANGE / IMPACTS				
	No change	Negligible Change	Minor Change	Moderate Change	Major Change
	SIGNIFICANCE OF EFFECT OR OVERALL IMPACT (EITHER ADVERSE OR BENEFICIAL)				
For WH properties Very High – attributes which convey OUV	Neutral	Slight	Moderate/ Large	Large/ Very Large	Very Large

- ICOMOS HIA Guidance, Appendix 3b, 2011
- Statement on Outstanding Universal Value (World Heritage criteria, authenticity, integrity and management)
- Attributes (Operational Guidelines, § 82):
  - form and design;
  - materials and substance;
  - use and function;
  - traditions, techniques and management systems;
  - location and setting;
  - language, and other forms of intangible heritage;
  - spirit and feeling; and
  - other internal and external factors.

# Assessment (background)



Attribute	Attributes	Result
1 Visual impact	Landmarks and points of elevated topography	Neutral
	'Characteristic' town views	Slight to moderate
	Everyday views and street space	Moderate to positive
2 Functional impact	Visitors: management and information	Positive
	Compensation of urban architecture deficits in the immediate surroundings	Positive
	Compensation of urban architecture deficits in the quarter	Positive
3 Direct physical impact	Building heritage	Neutral
	Material quality and scale	Moderate
4 Socio-economic impact	Jobs / investments	Positive
5. Cumulative impact	Pedestrian traffic	Positive
	Urban development	Positive
	Vehicle traffic	Moderate (development of a traffic plan required)
6. Impact upon the management	Tourism	Positive
	Regional development	Positive
	Promoting World Heritage and education	Positive
7. Impact upon the World Heritage property as a whole	Sustainable development	Positive (attention to balanced development required)

# S6: Summary of Various Assessment Layers





# S7: Recommendations: Masterplan and Buffer Zones



### Methodology:

- **Our basis:** Know-how in urban planning and conservation.
- **Approach:** We have positive experiences with visualizations which show planned transformations as transparent as possible in order to come up with future-oriented perspectives for sustainable planning- and conflict-solving strategies.
- **Principle:** We try to develop recommendations that can be fed back in planning processes. We include the relevant stakeholders. HIAs are seen as a process!

## Conclusion 2: HIAs as a process to support sustainable development



## Heritage Impact Assessment (HIA)

“A process of **identifying**, predicting, **evaluating** and communicating the probable effects of a current or proposed development policy or action on the cultural life, institutions and resources of communities, then **integrating** the findings and conclusions into the planning and decision making process, with a view to **mitigating** adverse impacts and **enhancing** positive outcomes.”

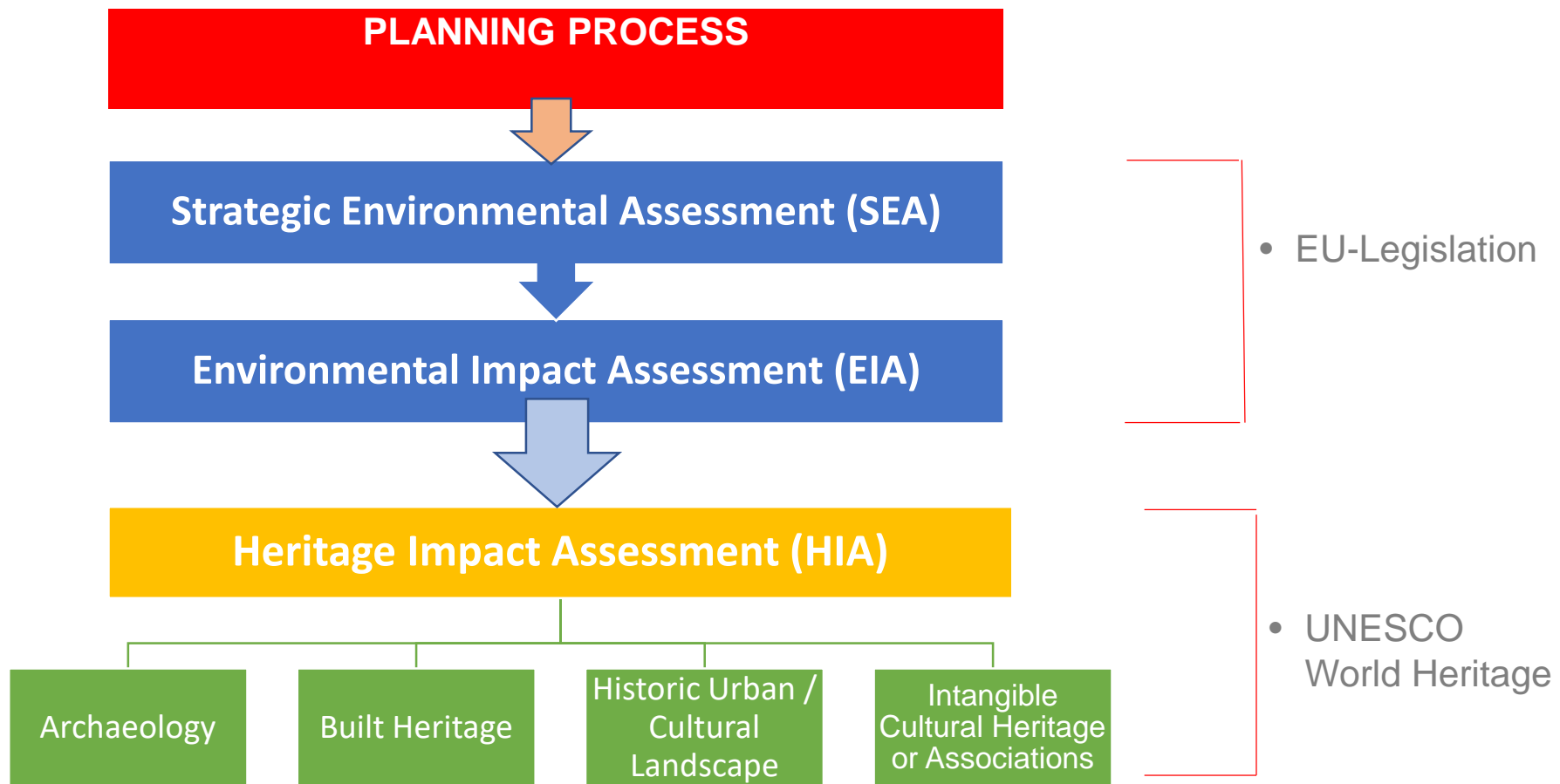
Def. Impact Assessment: International Association of Impact Assessment (IAIA)



*Heritage Impact Assessment* (© Michael Kloos)

# HIA as a Process: From Screening to Monitoring





- Not all of transformations in World Heritage properties are covered by EIAs!
- HIA as an assessment tool is not existing in EU-legislation – not legally binding!
- **Only particular planning processes are covered by HIAs!**

# Legislative Context of HIAs



## Heritage Impact Assessment

The potential impact of the Stockholm Bypass and Ekerö Road project on the Outstanding Universal Value of the World Heritage Property of Royal Domain of Drottningholm Sweden

Report phase I

January 2012



- Examples:
- HIA Stockholm Bypass and Ekerö Road / Sweden (2016)
- HIA Master Plan of South Dalmatia / Croatia (2016)

# HIA *plus* SEAs EIAs

*HIA*: Stockholm Bypass Road / Sweden

*Compilation*: 2016 (in cooperation with Katri Lisitzin)

*Client*: Trafikverket / Sweden





Fig. 1: Master Plan for the development of Functional Region of South Dalmatia © FRJD Trames

#### HERITAGE IMPACT ASSESSMENT

of the "Master Plan for the development of Functional Region  
South Dalmatia" with Strategic Environmental Assessment



- Combination of SEA and HIA on a strategic level.
- In parallel to planning process.
- Evaluations of SEA and HIA are supplementing each other.

# HIA of the Master Plan for the Development of (...) South Dalmatia

*Place:* South Dalmatia (1979)

*Compilation:* 2016 (in cooperation with Katri Lisitzin)

*Client:* Trames Consultants / Dubrovnik







# Question 1: Legislation and Timing

*Reason for HIA:* Waldschlösschen Bridge

*Place:* Dresden Elbe Valley / Germany

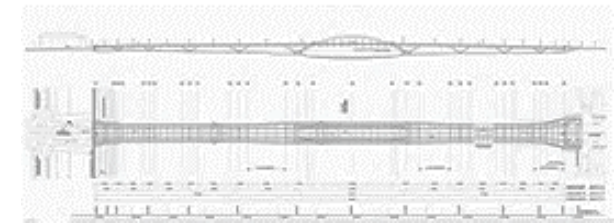
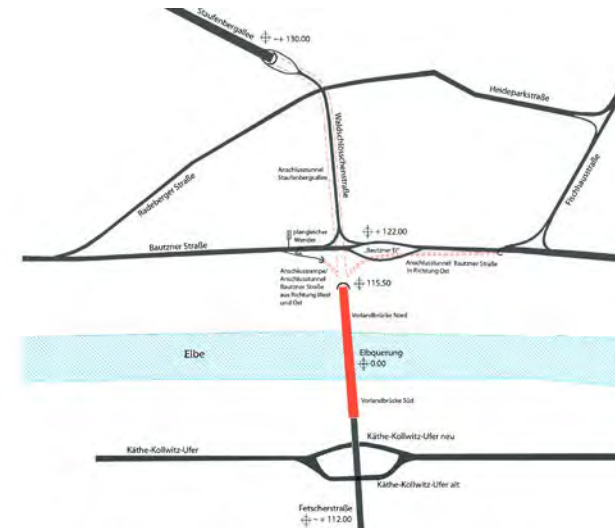
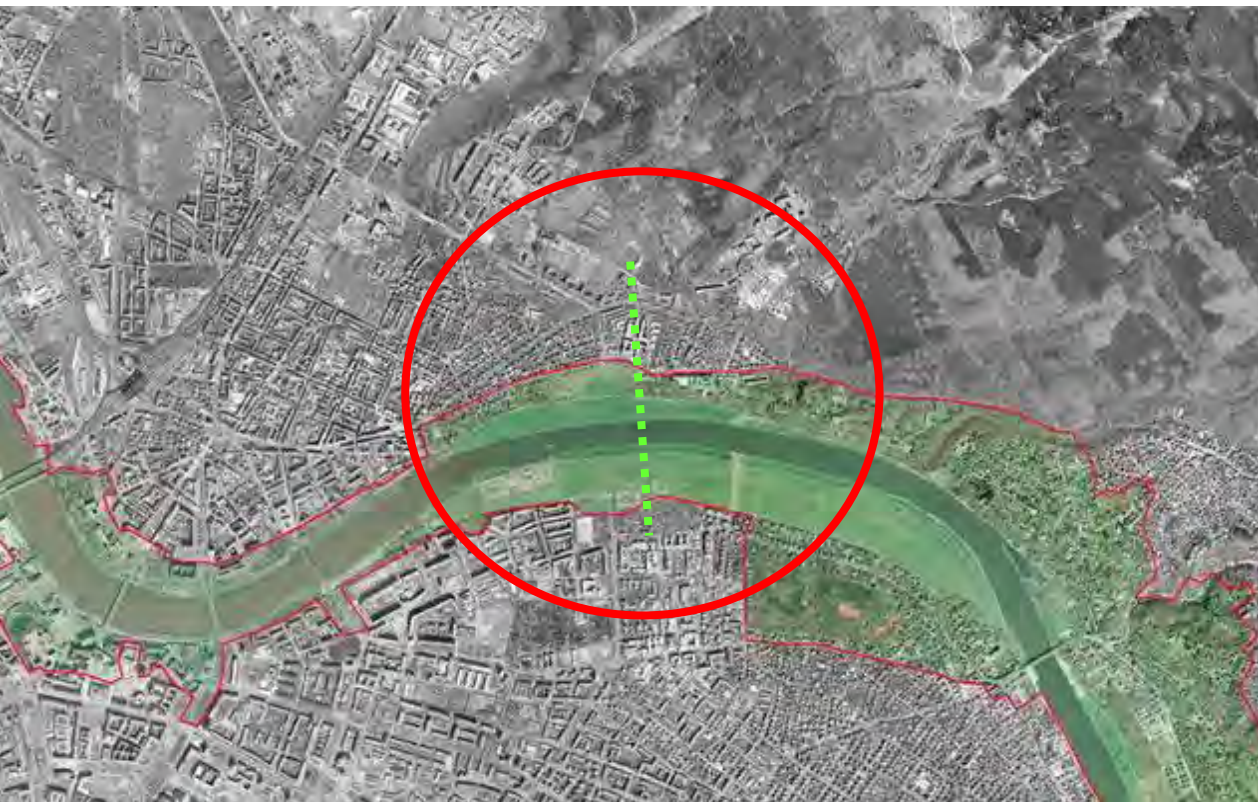
*Compilation:* 2006

*Client:* City of Dresden / German Commission for UNESCO





- Unique visual relationships as a key component of Outstanding Universal Value.
- Intensive interrelationships between “culture and nature” approx. 20 km “long” and strongly urbanized



# Waldschlösschen Bridge



Church of Our Lady



© v-cube

Church of Our Lady



**Recommendation,**

- Revision of the plans to build the bridge

# Impact Study: Visualizations





# Waldschlösschen Bridge: Withdrawn from the WH-List in 2009





- ▶ **Bad timing:** HIA commissioned only 6 weeks before planned tender for bridge construction!
- ▶ **Negative Result:** No time to develop mitigation strategies.
- ▶ **Follow-up:** Extreme tensions between local and international stakeholders.
  - HIAs should be compiled as early as possible (but come in mostly too late!)
  - HIAs cannot solve political problems!

# Conclusion: What Went Wrong?





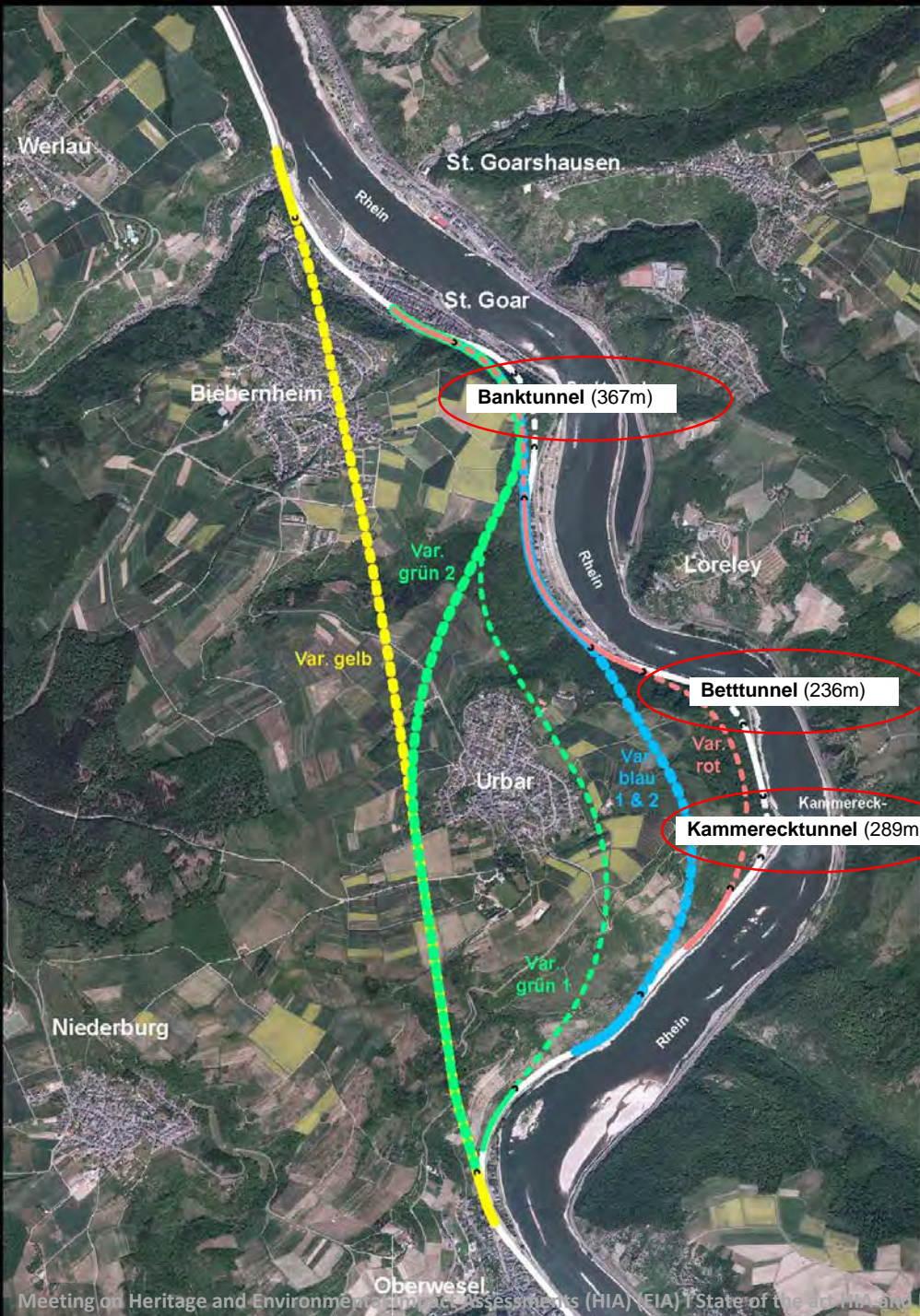
VIS Cologne Cathedral (2005):

# Impact Assessment + communication





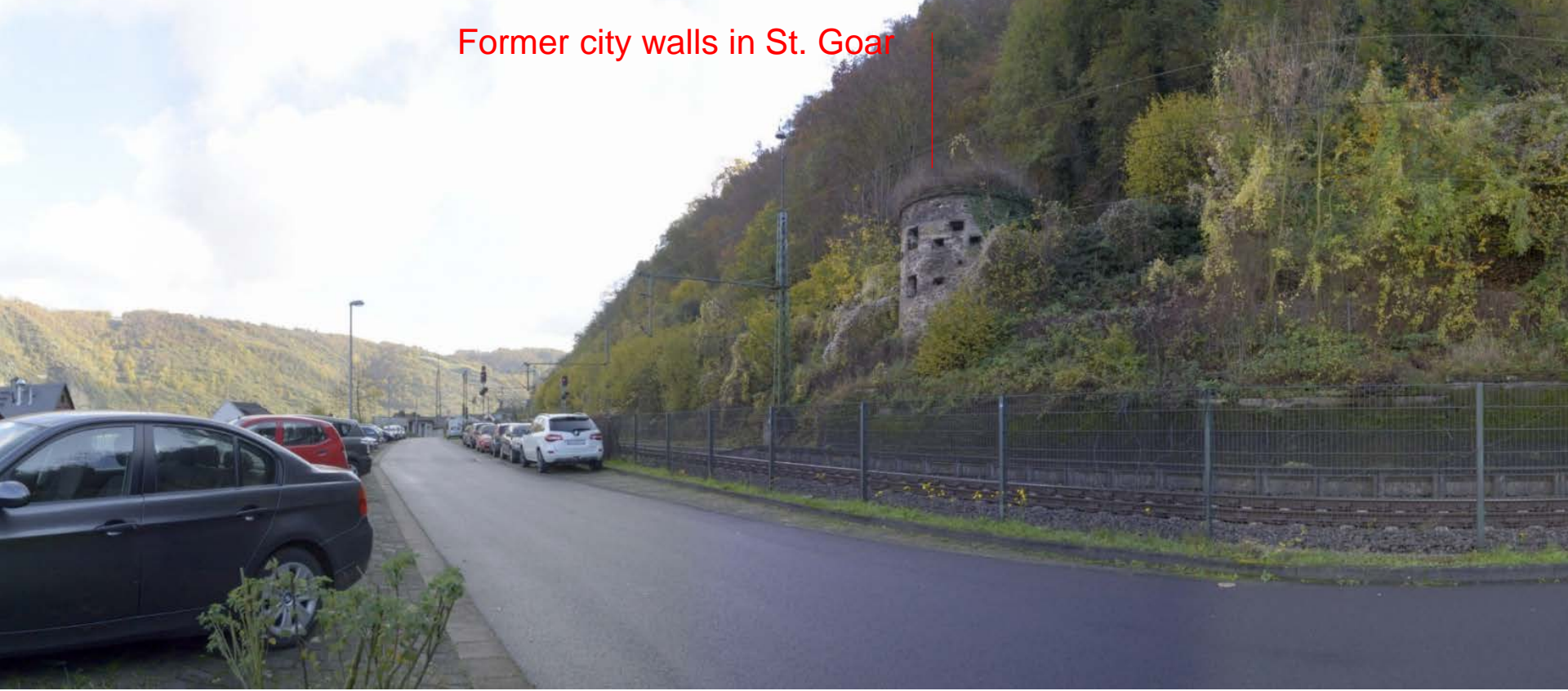




- 3 tunnels, 5 alternative railway tracks.
  - Evaluation of new tunnels entrances during planning process.
  - Participation of the local population.
  - Direct feedback of the examination results into the planning process.
- HIA as an element in a co-operative process to integrate local population.**



Former city walls in St. Goar



## Visualization and primary results / example St. Goar

- From the very beginning, the potential impacts of the planned railway tracks on the World Heritage property have been taken into account systematically in the planning process.

# Visualization



## Former city walls in St. Goar

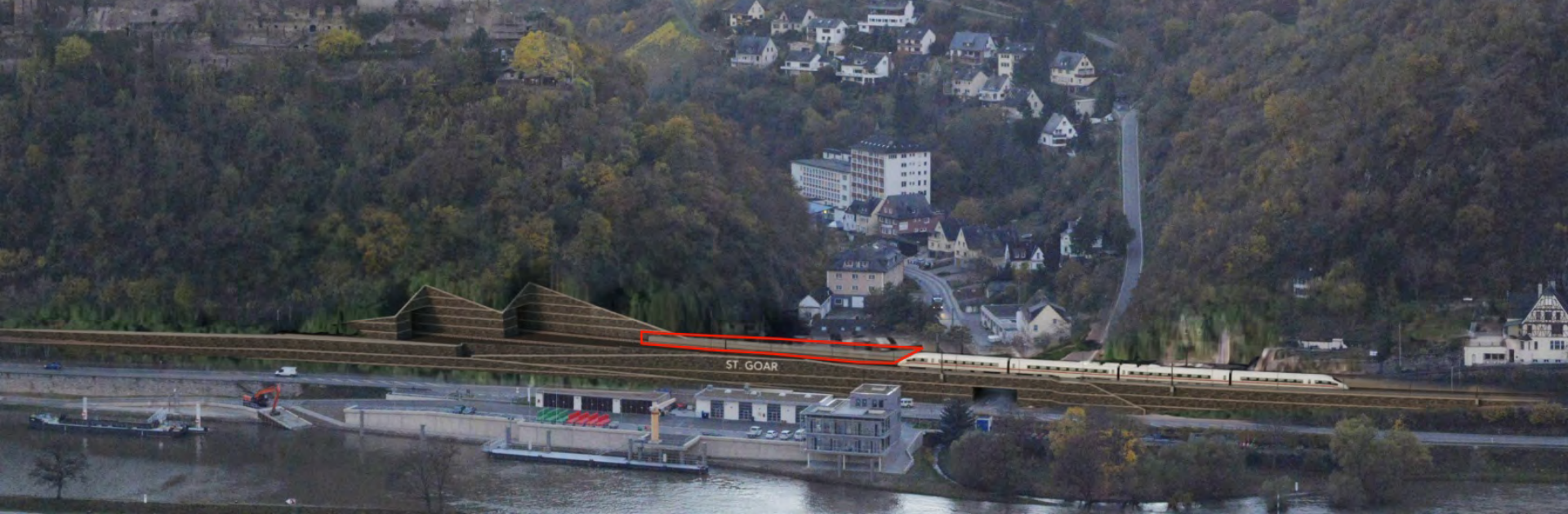


### Visualization and primary results / example St. Goar

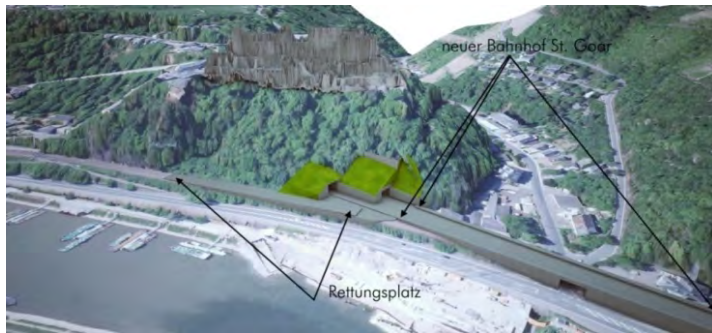
- From the very beginning, the potential impacts on the World Heritage was systematically assessed and discussed with relevant stakeholders (contracting authority, population, specialists, advisor bodies...).

## Visualization





1. First Assessment → 2. Discussion → 3. Improvements



# Impact Assessment & Communication

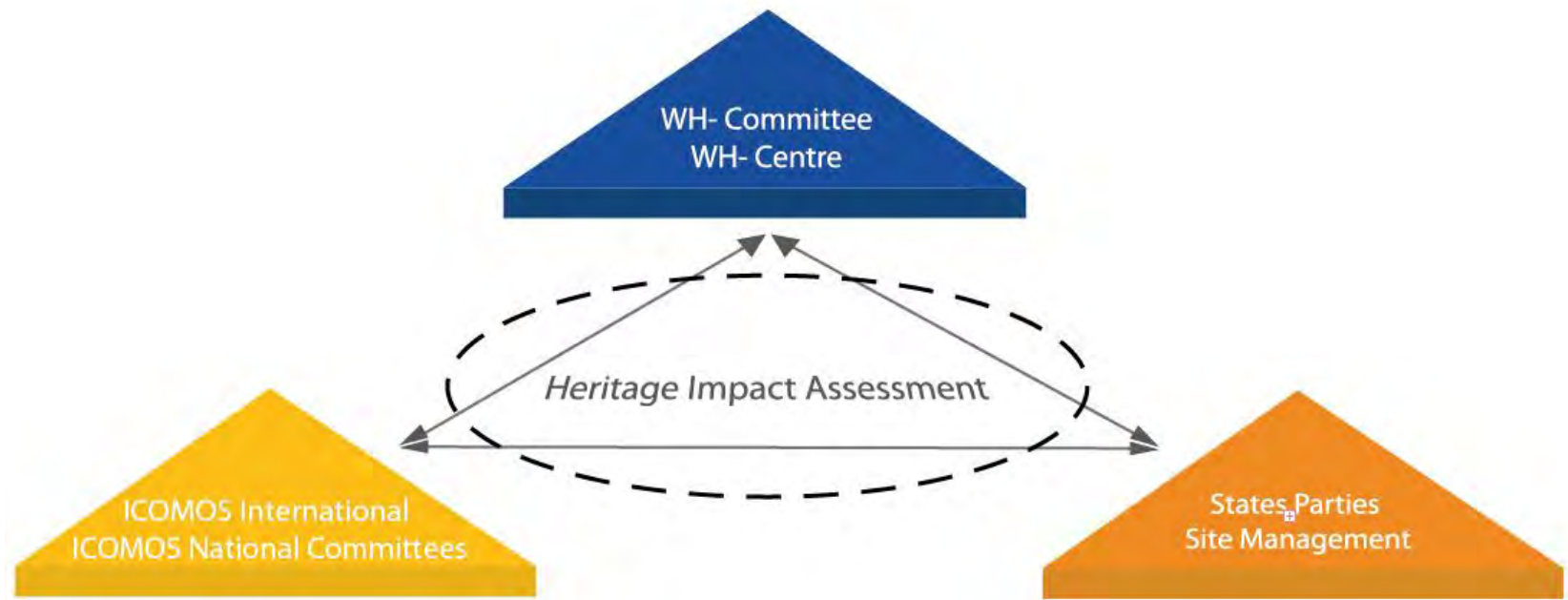




- HIAs can help to test directly the World Heritage compatibility of new proposals within the planning process.
  - HIAs can help to communicate complex planning processes.
- HIAs should be used as “pro-active” planning- and participation instrument!

# Conclusion: HIA as an instrument for planning, communication, mitigation

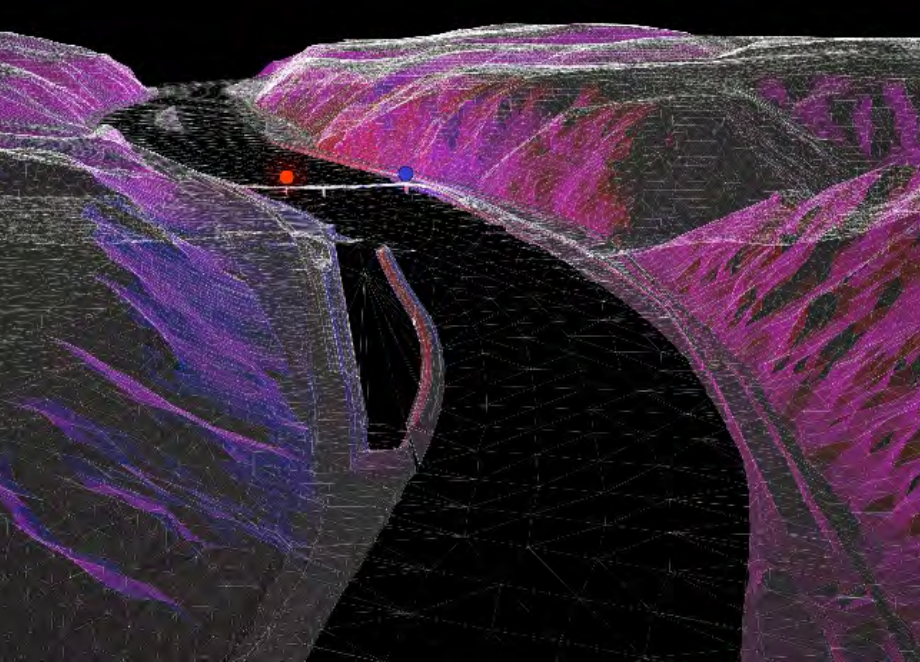




(© Michael Kloos)

# Conclusion 5: HIA as a 'pro-active' instrument for planning, communication, mitigation





## Upper Middle Rhine Valley – Upgrade of Management Plan with a ‘pro-active’ assessment system:

- *Background:* Many questions with regard to planning projects in the valley.
- *Goal:* Assessment of planned projects as soon as possible – during planning process.
- 3D-Modell of the entire valley.
- Statement of OUV and attributes will be qualified with participation of local stakeholders and regional representatives.
- Client: Rhineland-Palatinate / Ministry of Inner Affairs

# Research on Pro-Active HIA-System



# Question 3: OUV and Attributes?

*Reason for HIA: Gallery Lower Austria*

*Place: Wachau Cultural Landscape / Austria*

*Compilation: 2016*

*Client: Land Niederösterreich (Lower Austria, Ministry of Culture)*

*In cooperation with: Katri Lisitzin / Sweden (2<sup>nd</sup> opinion)*





## State Gallery of Lower Austria

- Main art gallery of Federal State of Lower Austria.
- International competition, 1<sup>st</sup> prize.
- Advisory Bodies participated in competition.
- Expert Panel to reduce the building volume.
- Advisory Body Critique: “No iconic buildings are needed in the World heritage site”.



Planned project



**Wachau Cultural Landscape**  
**A riverine landscape bordered by mountains**

Architecture

Settlements

Agricultural use

“Illustrate a medieval landscape”

▶ **OUV**

# Outstanding Universal Value





**Kriterium (ii):** Die Wachau ist ein herausragendes Beispiel einer in den **Bergen gelegenen Flusslandschaft**, in der sich der materielle Nachweis ihrer **langen geschichtlichen Entwicklung in einem bemerkenswerten Ausmaß bewahrt hat**. (...river landscape located in the mountains and very well preserved...)

**Kriterium (iv):** Die **Architektur, die menschlichen Ansiedelungen und die landwirtschaftliche Nutzung** des Landes in der Wachau illustrieren auf lebendige Weise eine grundsätzlich **mittelalterliche Landschaft**, die sich organisch und harmonisch **über die Zeit entwickelt hat**. (...architecture and land use structure illustrate medieval landscape...)

Eintragung als „**fortbestehende Kulturlandschaft**“ durch Wechselwirkungen zwischen Mensch und Natur.  
(„continuing landscape“)

# Outstanding Universal Value





Investigation area in 1935





Krems

Stein

Investigation area today

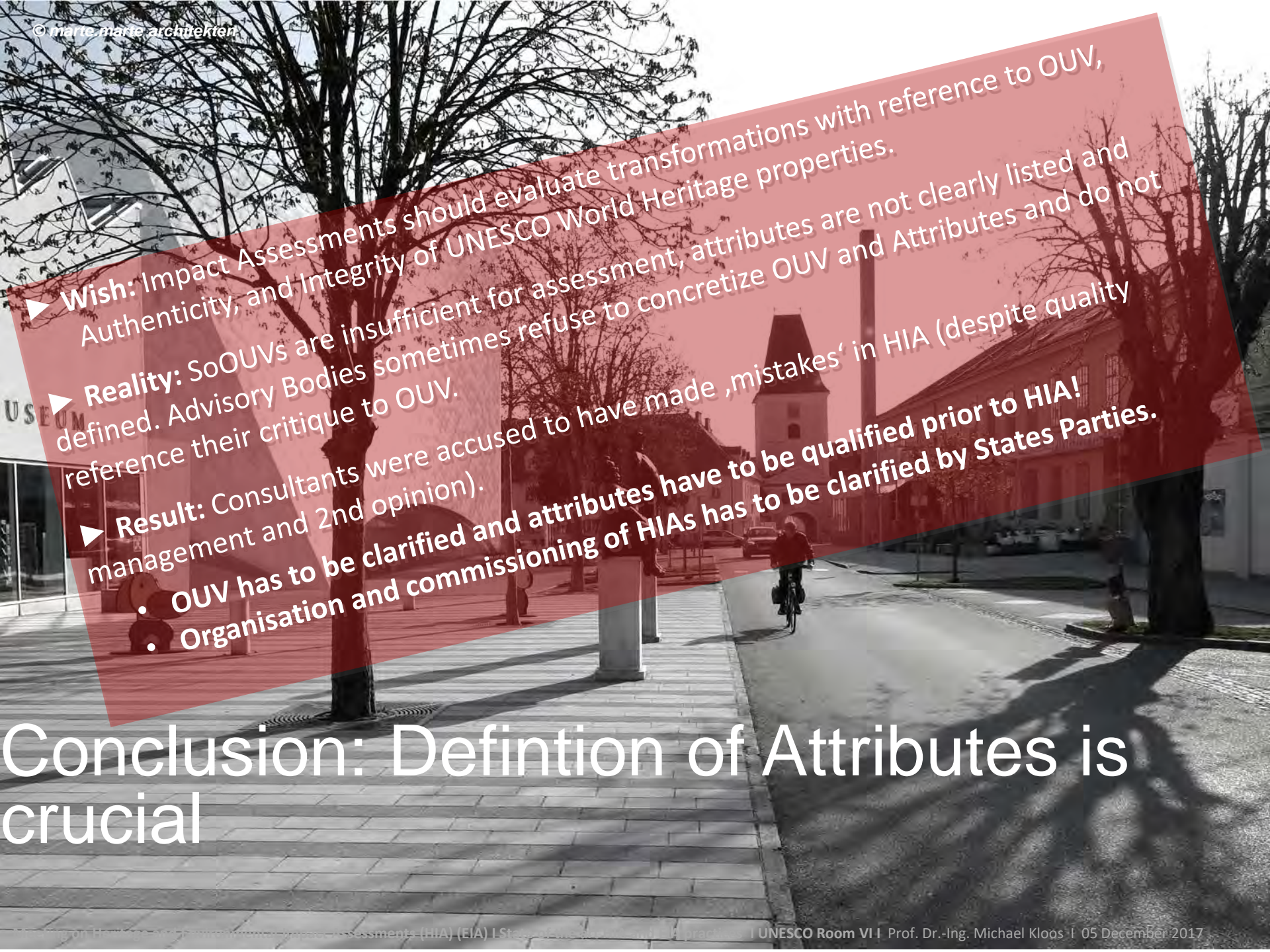




Attribut	Veränderung	Ergebnis
Landschaftliches Gesamtbild / Ortsbild	moderat	groß
Historische Stadtsilhouette	gering	moderat
Dachlandschaft	gering	moderat
Einzeldenkmäler / Dominanten	vernachlässigbar	gering
Alltagswahrnehmung / Tägliche Nutzung	positiv	positiv
<b>GESAMT</b>	<b>gering</b>	<b>moderat</b>

# Assessment / Attributes





► **Wish:** Impact Assessments should evaluate transformations with reference to OUV, Authenticity, and Integrity of UNESCO World Heritage properties.


► **Reality:** SoOUVs are insufficient for assessment, attributes are not clearly listed and defined. Advisory Bodies sometimes refuse to concretize OUV and Attributes and do not reference their critique to OUV.

► **Result:** Consultants were accused to have made 'mistakes' in HIA (despite quality management and 2nd opinion).

- OUV has to be clarified and attributes have to be qualified prior to HIA!
- Organisation and commissioning of HIAs has to be clarified by States Parties.

# Conclusion: Definition of Attributes is crucial





# 4 Capacity Building and Education



Dutch Cultural Heritage Agency, Ministry of Education, Culture and Science  
Flanders Heritage Agency  
The Austrian Federal Chancellery  
German Ministry for Foreign Affairs  
Under Auspices of German Commission for UNESCO

# HIA<sub>s</sub>

in UNESCO World Heritage Properties

Heritage  
Impact  
Assessment  
*Methodologies*

Eindhoven  
28-29 September 2015

Workshop  
Programme



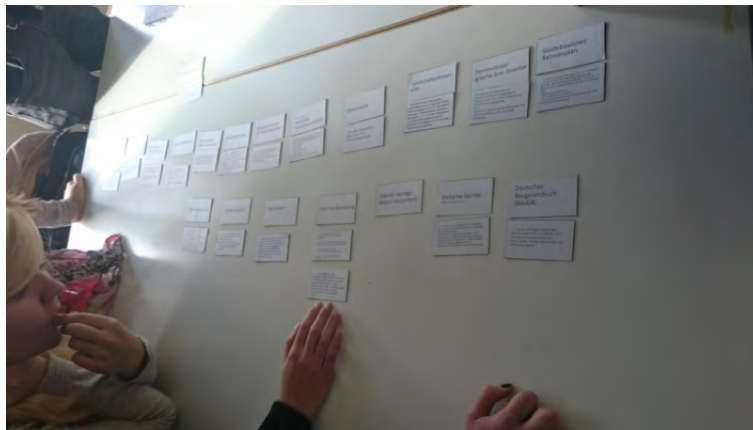
# 10 years HIAs - No Feedback! Three workshops to take stock





(University of Applied Sciences Wiesbaden Rüsselsheim)





# Training: Study course 'Heritage Design' (B.Sc.)

(University of Applied Sciences Wiesbaden Rüsselsheim)



- ▶ **Purposes and Types:** HIAs are used for various purposes. (Search for political solutions / ‘pro-active’). Methodologies and manuals must be adapted to this. Scientific knowhow should be included in manuals (Evaluation Theory!).
- ▶ **Effectiveness and Legislation:** HIAs have no juridical status and are not legally binding! Therefore, HIAs come in mostly too late. It is necessary to embed HIAs in existing legislative systems (EU- and nationwide), as well as into Management Plans.
- ▶ **Planning and Governance:** HIAs can only be applied successfully if applied in ‘pro-active’ manner. Embedding in planning processes allows to feedback results. Stakeholders and social communities *have* to be involved in HIA-assessment processes.
- ▶ **OUV and Assessment:** HIAs have to be based on OUV and related attributes. There is a need for *concrete Statements of OUV, incl. clear descriptions of attributes*, so that assessments can be quantified and qualified. Qualification of attributes should be done prior to HIA (Terms of References) and not by consultants!
- ▶ **Organisation and Financing:** Who commissions HIAs? Who pays HIAs? States Parties need to define standards for this.
- ▶ **Training, Know-how and Quality:** Quality, methodological approaches and results concerning the implementation of HIAs are varying significantly. Most HIA-practitioners are self-taught. Systematic training is necessary.

# Conclusion: HIAs - Questions for Research



# WH-site London Tower

source: Christine Matthews [www. Geograph.org.uk](http://www.Geograph.org.uk)

# Thank You!

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