

# Ex-post evaluation of Cost Benefit Analysis (CBA) at ISPA level

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## Context

- ISPA project for water and wastewater sector
  - First approvals in 2000
  - Finalization of implementation in 2010 and even 2011
- Implementation in parallel with the SOP Environment (2007-2014)



## Requirements (1)

### Socio-economic forecast

- Confirmation of the socio-economic forecast, especially of the forecasted costs and benefits
- In case the forecast of demand and costs have recorded significant changes compared with the initial forecast, the impact on the CBA analysis has to be assessed
- If the initial forecast is considered to be accurate (close to reality), this has to be confirmed by a statement



## Requirements (2)

### Financial analysis

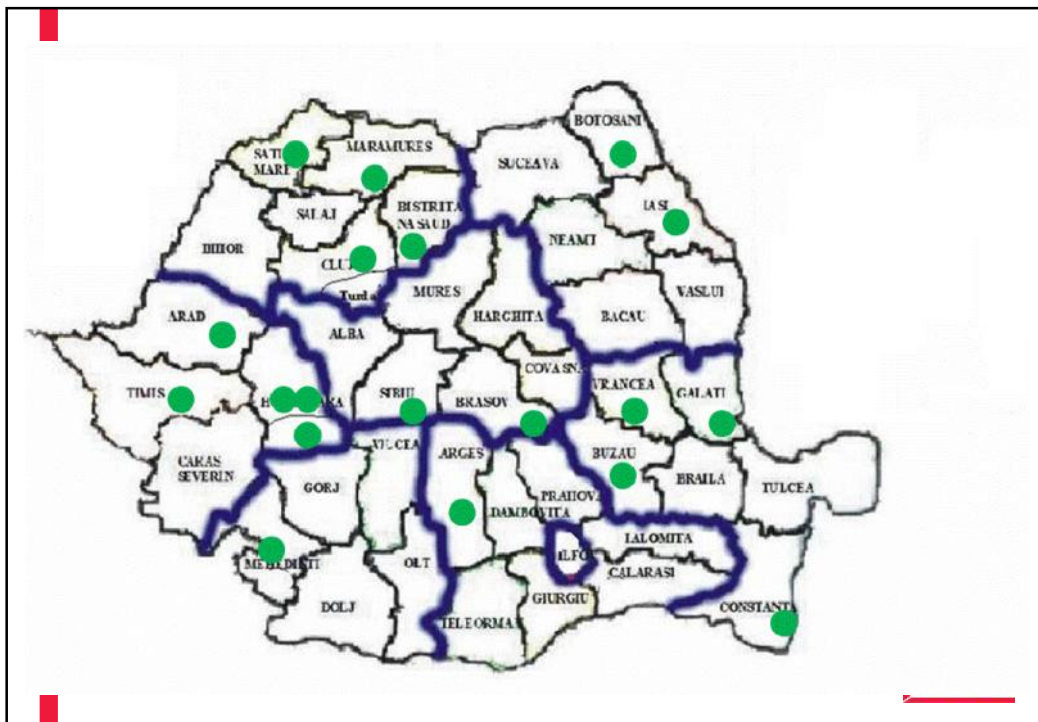
- In case the financial forecast (which include, for example, total costs of investment, forecasted operating costs and revenues) has been considered in the initial analysis of the project, this estimations will be updated and confirmed
- In case the initial forecast are considered to be correct, this has to be confirmed by a statement
- If at the moment of the final reporting, unforeseen revenues at the moment of the initial analysis are identified, this has to be quantified and explained

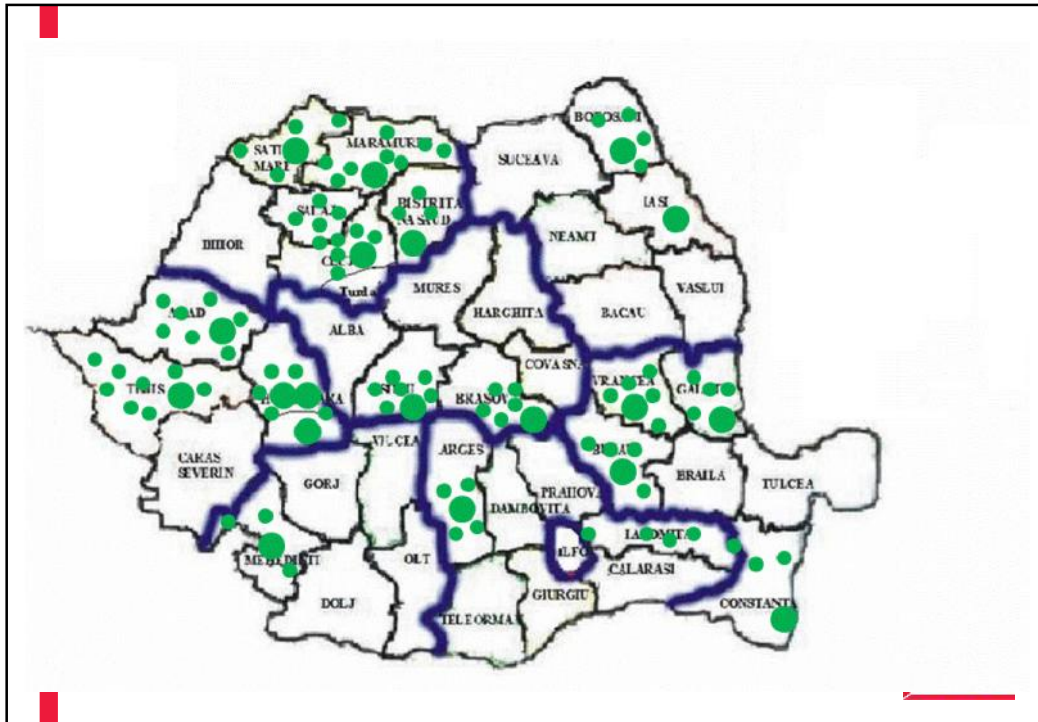
Note: If the change in the forecasted net revenues is higher than 10% compared with the initial forecast, the grant intervention rate can be revised. A reduction of grant can be considered if the NPV of the generated net revenues exceeds more than 15% of the NPV of total revised costs (or if the percentage of national financing set initially is higher than 15%)



## Real life...

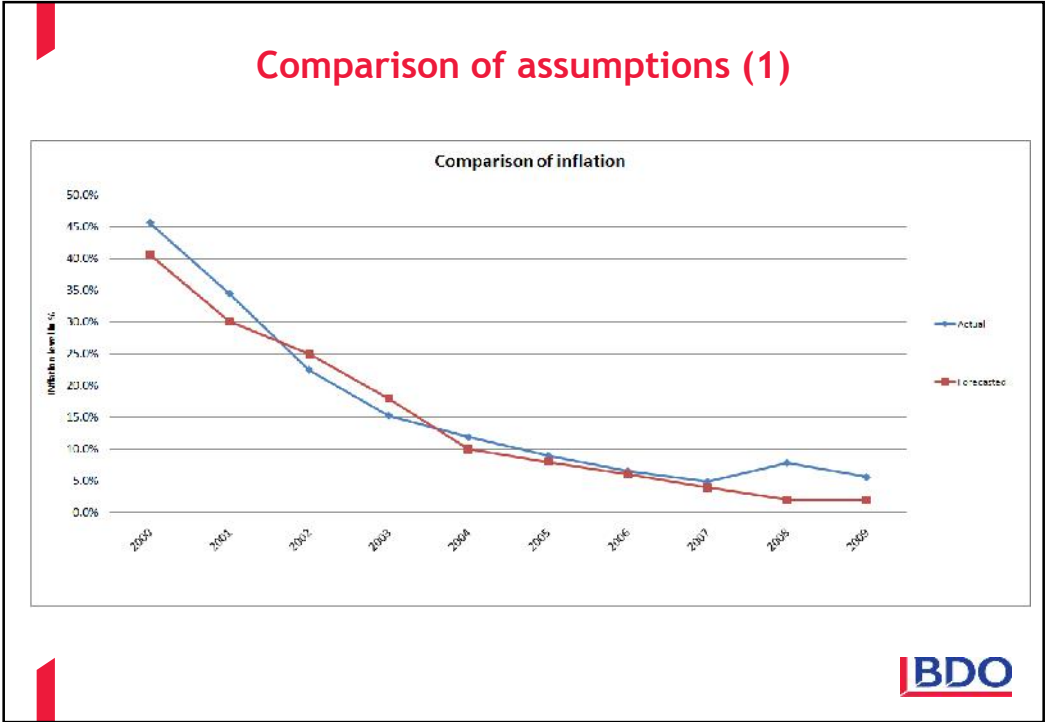
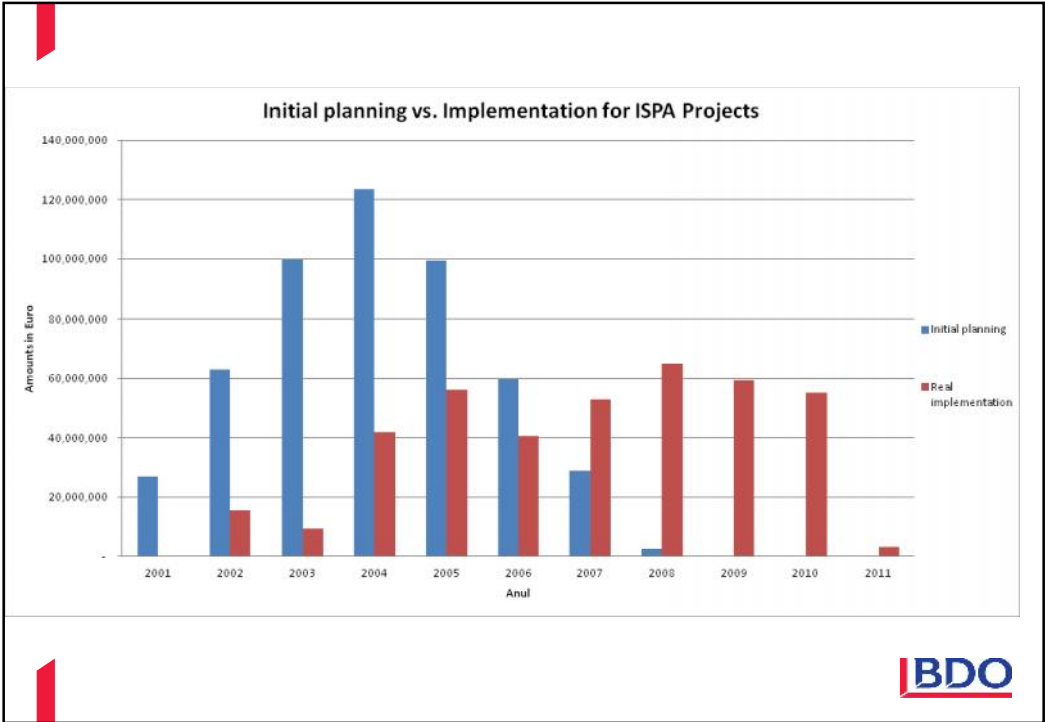
- Major changes compared with the initial assumptions
- The incremental approach is very difficult to apply
- The “Regionalization” issue - isolation of the ISPA area
- The impact of the SOP Environment project
- For many ISPA project, the analysis was performed without respecting the methodology



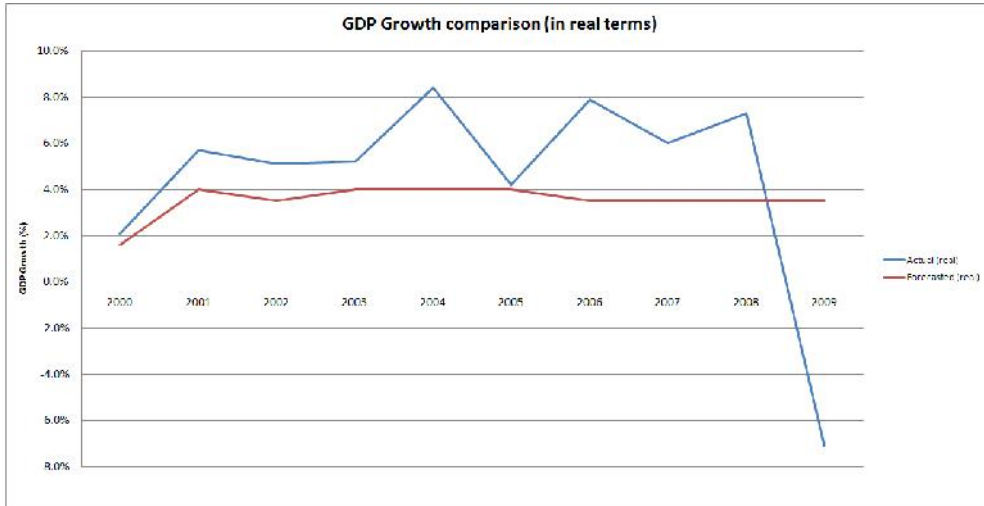


## Approach

- Comparison of the assumptions with the actual “life”
- Recalculation of the CBA:
  - Financial analysis
  - Economic analysis
  - Sensitivity and risk analysis



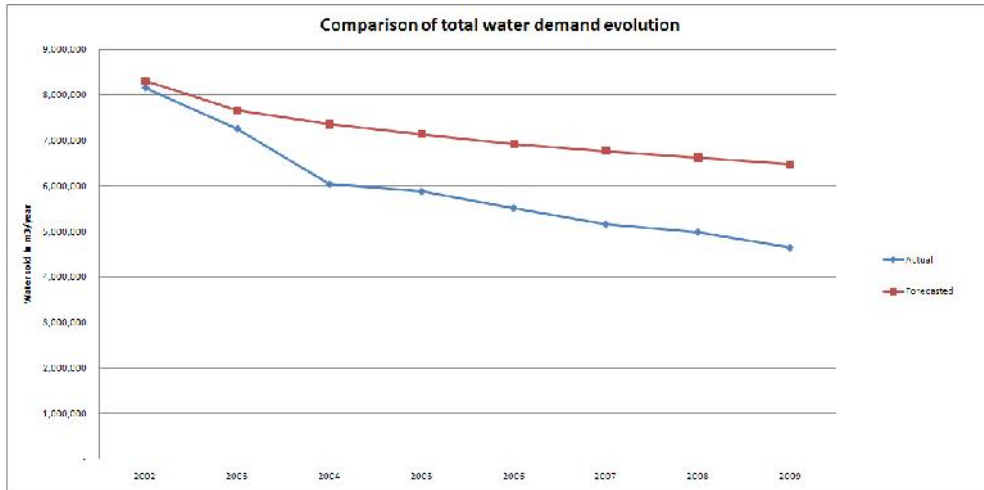
## Comparison of assumptions (2)



## Comparison of assumptions (3)



## Comparison of assumptions (4)



## Funding gap calculation

The analysis has been carried out taking account of the note transmitted on the 14th April 2003 on the Simplification, transparency, and coherence in the evaluation of major infrastructure projects.

After simplification, the amended formula of the ratio of the financing gap leads to the following result (for Cohesion Fund and ISPA projects):

$$rEU = C / (C+R)$$

where rEU is the maximum Community aid rate, C represents the discounted total cost of initial investment and R the discounted operational net revenue (including the residual value).



## Example of financial results

Recalculation of CBA		Initial ISPA Application	
FNPV/C	FRR/C	FNPV/C	FRR/C
(10,674,889)	-5.70%	N/a	-1.16%

Funding gap level		Variation	
Recalculation of CBA	Initial ISPA Application	In absolute terms	In percentage (variation/initial value)
74.6%	74%	-0.6%	-0.76%

Recalculation of CBA		Initial ISPA Application	
FNPV/K	FRR/K	FNPV/K	FRR/K
1,440,193	19.96%	N/a	0.5%



## Example of economic results

Indicators	ISPA Application	Updated CBA
Economic NPV (Euro)	(2,277,034)	13,021,459
ERR (%)	5.66%	9.94%
BCR	1.42	1.13





## Lessons learned

- There was no clear guide or methodology for ex-post CBA analysis
- Lack of initial CBA analysis for many projects (Excel files, Reports, etc)
- The changes for the beneficiaries were significant mainly due to:
  - Regionalization
  - Preparation and implementation of SOP Environment



## SOP Environment (1)

### INFORMATION NOTE TO THE COCOF GUIDANCE NOTE ON ARTICLE 55 OF COUNCIL REGULATION (EC) NO 1083/2006: REVENUE-GENERATING PROJECTS

- If the "funding gap" is established correctly and the conditions of implementation of the project do not change significantly, there is, in principle, no need for the managing authority to modify the grant contribution allocated to the project.
- However, in case monitoring reveals important discrepancies between the revenue initially estimated and the revenue which will be realized in the end, managing authorities are advised to envisage mechanisms that would allow them to readjust the grant calculation.



## SOP Environment (2)

Refunds are required where it is established after the closure of the programme, and at the latest within a period of three years following the closure of that programme, that:

- (a) certain sources of revenue to be generated by the project have not been taken into account in the calculation of the funding-gap and/or new sources of revenues appeared after the calculation of the funding-gap;
- (b) there are changes in the tariffs policy of such importance that they question the exactness of the funding-gap calculation.

In any case, changes in demand or other external economic factors (such as un-foreseeable price inflation) would not be linked to an inadequate application of the funding gap method and therefore does not require a refund



## SOP Environment (3)

- The threshold over which refund could take place could be a **10% variation in the funding-gap**.
- This means that if the funding-gap varies less than 10% no refund must be made.
- However in principle a variation of the funding-gap of more than 10% is considered by the Commission as the level of variation indicating that the funding-gap has not been properly calculated initially.



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