

# Experiences with pre-testing of a survey instrument for forest valuation in the Czech Republic: problems and experiences

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# Presentation

- Description of the pre-survey
- Main findings
- Implication for future work



# The project

- Monetary valuation of recreation and aesthetical function of forest in the Czech Republic
- 2006 – 2007
- Ministry of Agriculture of the Czech Republic
- 6 researchers from CUEC
  
- 4 WP
  - Off-site (2006/7, N = 1200)
  - On-site (2007, N = 500)
  - Aggregation of results for the CZ (2007)
  - Tools - evaluation of policies (2007)



# The project

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# Off-site survey

- Blueprint: Jan Melichar's TCM survey Jizerské hory 2005
- Pre-survey (semi-structured interviews)
  - 19-26.10. 2006 (N = 20) – variable sample (Prague)
  - 5.-15.1. 2007 (N = 15) – variable sample (Prague)
- Data collection (SC&C, stratified quota sampling)
  - pilot (Feb 2007)
  - main wave (Feb – Mar 2007)



# Description of pre-survey



# Pre-survey administration

- 20 semi-structured interviews (varied sample)
- in-hall
- scenario
  - questionnaire (TCM + CE + CVM)
  - supplementary semi-structured questions
  - remuneration of respondents
- 75 minutes
- remuneration of respondents (400 – 500 CZK)
- 3 interviewers



# Scenario

- TCM (recreation trips)
  - short trips (less than 4 hours – “in the neighborhood”)
  - 1-day trips (4 hours – 1 day)
  - overnight trips
- CVM (forest bird species)
  - one protected specie (black stork – *ciconia nigra*)
  - 19 endangered species
- CE (attributes of forests – “trip”)
  - attributes of visited forests (damage, density, leave/ coniferous trees, deforestation, bird species, age variability, travel costs, visitors, accommodation, parking lots)
  - rather experimental



# TCM

## All trips

- in the forest in CZ
- during summer season IV – X. 2006

## ● Short trips

- in the vicinity of home, did not take more than 4 hours
- for all locations visited: total number of visits/ monthly frequency, transportation modes, average duration
- for last location visited: transportation mode, motives, activity, duration, stated TC, number of people

## ● 1-day trips

- 4 hrs to 1 day
- for all locations visited: total number of 1-day visits, transportation mode
- for last location visited: travel mode, stated TC, number of people, motives, activities

## ● Overnight trips

- over 1 day
- for all locations visited: number of visits, number of days spent in the area
- for last location visited: duration, type of accommodation, travel mode, number of people, stated TC, motives, activities, other sites visited (multipurpose)



# TCM – example of site sheet (1-day trips)

	Rekreační oblasti	Počet jednodenních výletů
	<i>Střední Čechy</i>	
1	Český ráj	<input type="text"/>
2	Kokořínsko	<input type="text"/>
3	Český kras	<input type="text"/>
4	Křivoklátsko	<input type="text"/>
	<i>Jižní Čechy</i>	
5	Blanský les	<input type="text"/>
6	Šumava	<input type="text"/>
7	Novohradské hory	<input type="text"/>
	<i>Západní Čechy</i>	
8	Český les	<input type="text"/>
9	Slavkovský les	<input type="text"/>
10	Krušné hory	<input type="text"/>
	<i>Severní Čechy</i>	
11	České Švýcarsko	<input type="text"/>
12	Labské pískovce	<input type="text"/>
13	České Švýcarsko	<input type="text"/>
14	Lužické hory	<input type="text"/>
15	Jizerské hory	<input type="text"/>
	<i>Východní Čechy</i>	
16	Krkonoše	<input type="text"/>
17	Broumovsko	<input type="text"/>
18	Orlické hory	<input type="text"/>
19	Železné hory	<input type="text"/>
20	Žďárské vrchy	<input type="text"/>
	<i>Severní Morava</i>	
21	Jeseníky	<input type="text"/>
22	Beskydy	<input type="text"/>
	<i>Jižní Morava</i>	
23	Moravský kras	<input type="text"/>
24	Bílé Karpaty	<input type="text"/>
25	Podyjí	<input type="text"/>
	<i>Jiné oblasti (DOPLŇTE):</i>	
26		<input type="text"/>
27		<input type="text"/>
28		<input type="text"/>
29		<input type="text"/>
30		<input type="text"/>
31		<input type="text"/>
32		<input type="text"/>
33		<input type="text"/>



# CVM

- CV questions
  - a) WTP to ensure that current number of black storks nesting in the CZ (300) will be maintained over the next 20 years (otherwise decrease by 50%)
  - b) WTP to ensure that current numbers of 19 endangered forest bird species (30 000) will be maintained over the next 20 years (otherwise decrease by 15%)
- Elicitation format
  - double bounded dichotomous open-ended format
- Payment vehicle
  - annual payments to AOPK for the next 20 years
  - AOPK (Agency for Nature Conservation and Landscape Protection of the CR) will reimburse owners of the forests
  - owners would introduce a protection measures and will be reimbursed for losses due to measures
  - regular controls by AOPK (money will be used)



# CVM graphics

## KARTA 14

### ČÁP ČERNÝ



#### Současná situace

##### Čáp černý

- hnízdí na celém území ČR
- dává přednost rozsáhlejším lesům, smíšeným, listnatým i jehličnatým
- migrující druh (stráví polovinu života na cestách a v zimovištích)
- současný stav populace černých čápů v Česku - asi 300 párů

#### Příčiny ohrožení čápa černého

- citlivý na velkoplošné lesnické zásahy
- hnízda budují na starých vzrostlých stromech v porostech
- v současné době populace čápa nijak výrazně neklesá
- nevhodné lesní hospodaření může spustit pokles populace tohoto druhu o polovinu, ze 300 na 150 za 20 let

#### Jak čápa černého chránit - citlivé lesnické hospodaření

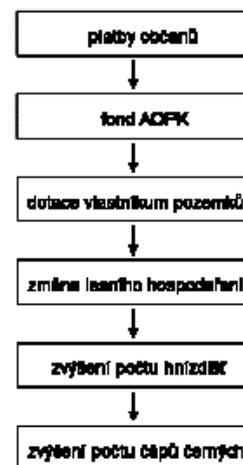
- o ochrana v širším okolí hnízdišť
- o 1 km kolem hnízda bez lesnických zásahů

#### Dopady změny hospodaření

- změna způsobu těžby dřeva
- snížení produkce dřevní hmoty
- snížené výnosy vlastníkům lesů

## KARTA 15

### VYUŽITÍ PROSTŘEDKŮ Z FONDU AGENTURY PRO OCHRANU PŘÍRODY A KRAJINY V ČR

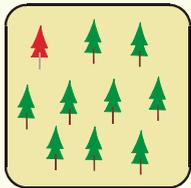


# CE

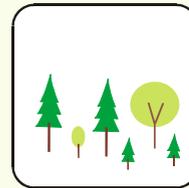
- Rather experimental (10 attributes)
- Exercise
  - introduction of attributes (“subjective” and “objective”)
  - description of 2 forests using the 10 attributes
  - which of the 2 forests would they choose for a recreation activity?
- Answers to questions...
  - are they able to imagine such forests?
  - which attributed people perceive?
  - which attributes people ignore (reduction of complexity)?
  - which attributes are important to them?
  - which attributes are not perceived at all?
  - what attributes are missing?



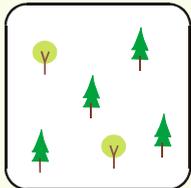
# CE attributes



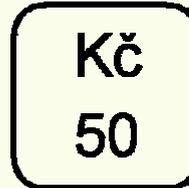
proportion of damaged trees



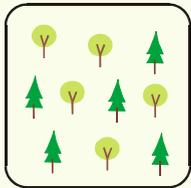
age variability of trees



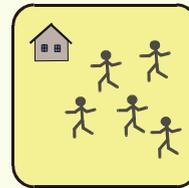
forest density



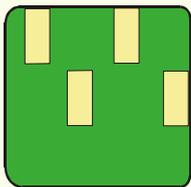
travel cost



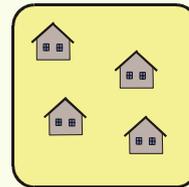
proportion of broadleaf trees



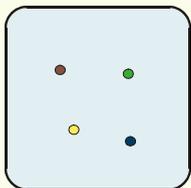
number of visitors  
(met in 1 hour)



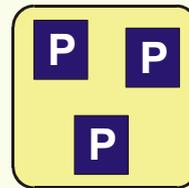
proportion of  
deforested area



number of  
accommodation facilities



number of protected  
bird species



number of parking lots  
in the vicinity



# Results of pre-survey



# TCM: pre-survey results

- General problems
  - “outdoor recreation” – no wilderness to go in CZ (cultural and social aspects – summer houses, castles, socializing)
- Short trips
  - in Prague very important (some daily)
  - problems with TC (annual/ monthly tickets or walking)
  - multipurpose (walk and talk, travel to work, walking a dog/ kids, visits)
  - problems to determine their length and frequency
- 1-day trips
  - relatively easiest
  - problems with stated TC (esp. women)
  - multipurpose (summer houses, visits) not such a big problem
  - problem are trips within trips
- Overnight trips
  - most tricky
  - multipurpose (borders philosophical questions of ultimate motivation)
  - how much time do they really spend out-door?
  - visits to multiple sites (no isolated outdoor areas)
  - stated TC (esp. women, members of family groups etc.)



# CVM: pre-survey results

- Everybody supports protection measures, nobody wants to pay...
- CV questions
  - people got the information (in spite of its length – awkward for interviewer)

## **Average WTP**

- 1380 CZK for black storks
- 1230 CZK for 19 species
- Protesting (50 %)
  - AOPK would misuse/ use inefficiently the money
  - owners will misuse the money
  - not enough people will pay
  - why to pay for one and then for 19? (scammed)
- 1 specie vs. 19 species
  - qualitatively different products – cannot measure scope



# CE: pre-survey results

- 2 models of forest (not dominant)

FOREST A: in a good shape, low density, lot of broadleaf trees, lot of deforested area, some protected species, variable age, low travel-cost, high number of visitors, low number of accommodation facilities, many parking lots

FOREST B: in a bad shape, high density, few broadleaf trees, some deforested area, many protected species, same age, high travel-cost, low number of visitors, high number of accommodation facilities, few parking lots

- Answers:

- People not just able to imagine such forest, they interpreted both descriptions: FOREST A = municipal forest; FOREST B = mountain forest
- Their interpretation seemed to influence their decisions (they think up things?)
- FOREST A preferred for shorter trips, FOREST B preferred for longer trips
- All attributes perceived, but some only as proxy (number of species = quality of forest)
- Most important attributes: price, damage, number of visitors
- People detected inconsistencies (low number of visitors vs. high number of accommodation capacity, accommodation capacity vs. number of parking lots)
- What seemed to be missing was clear information about precise recreation activity



# Implications



# Off-site survey

Population	Sample	CVM (2 versions)	TCM (type of trip)		
			short	1-day	overnight
Prague	50	YES	YES	YES	YES
Prague	250	YES	YES	YES	YES
CZ	900	YES	NO	YES	YES
<b>TOTAL</b>	<b>N = 1200</b>				



# Implications

- TCM
  - more precise clarification of outdoor recreation activity
  - other problems cannot be possibly overcome within this project
- CVM
  - further pre-testing
  - smooth down protesting (control mechanism, positive examples)
  - control variables influencing protesting (trust in institutions...)
  - use only two 1-specie CVM (rotation)
  - other problems cannot be possibly overcome within this project
- CE
  - developed strong interest in CE
    - interpretation of attributes
    - interference of attributes
    - what is forest „in general“?
  - decide to drop CE (costly administration)



Thank you for your attention

