Tourist Flow Management in Natural Area:
Concretes Applications of Counting Data

Facts about Eco-counter
Facts about Eco-counter

- Service Office in Canada since 2009
- Specialized on monitoring Pedestrian & Bikes
- Very proactive R&D department
- Over 3000 systems in 40 countries.
- 14 distributors: UK, Spain, Belgium, Ireland, Australia, New Zealand, Poland, Sweden, Norway, Finland, Italy, Lithuania……
- High level of service

How to Choose a Counter

Counting data have an important role: reliability and accuracy are fundamental

Important features to consider before choosing a counter:
1. Waterproofness
2. Reliability over time
3. Easy to use
4. Capital budget, but also operating costs
5. Accuracy: test before buying

All the counters are not equals
How to Choose a Counter

Counting data have an important role: reliability and accuracy are fundamental.

Eco-counter projects

We identify 3 different classes of projects:

1. **Tourist Flow Managements**:
   - Parco Portofino: Counting Data as Daily Use
   - Parco Adamello Brenta: Sustainable Mobility in Alpine Area

2. **Research Project**
   - Malaga University: Land Carrying Capacity
   - Nina: Wild Reindeers

3. **National Networks**
   - Metsähallitus (Finland)
   - Parc Nationaux de France (France)
     - Case study: Parc des Pyrenees
Parco Portofino: 1,056 ha + Marine Protected Area
Most important sites: urban (Portofino) and wild Mediterranean coast.

**Parco di Portofino**

**Counting Data as Daily Use to:**
- Find out the number of pedestrian visiting Natural Sites
- Follow touristic trends and improve strategy

**2006**
- **Quantity:** know how many tourists come into the Park (estimation)
- Installation of one counter in the "most wanted" hiking trail (Pietre Strette)

**2009**
- Review strategy: needs of more information.
- **Spatial Distribution** of visitor: to monitor the entries and to understand the most wanted trails (boat access)

**2009**
- Monitor different users to find out users' conflicts (bicycle & pedestrian)
- Define and quantify user's types to improve tourist knowledge and adapt strategies
Parco di Portofino

Counting Data as Daily Use to:

- Find out the number of pedestrian visiting Natural Sites
- Follow touristic trends and improve strategy

Parco di Portofino

Value touristic flows to:

- Know the charge of pedestrian on Natural sites
- Create a database in order to manage studies

2009

- Improve Security and Regulation in Via dei Tubi

Next steps

- Protection of nature (nesting and breeding area)
- Improve general strategy to welcome visitors
- Communication towards local population and tourist

Contact and sources

- Form more information contact:
  - Mr. Roberto Cavagnaro, r.cavagnaro@parcoportofino.it
Parco di Portofino

Value touristic flows to:
- Know the charge of pedestrian on Natural sites
- Create a database in order to manage studies

Parco Adamello Brenta

- Parco Adamello Brenta: 620km²
- Most important sites: Brenta Group and Bears
Parco Adamello Brenta

Suistanable Mobility in an Alpine Area

**2003**
- The Park is “used” as locality for driving excursions during week end.
- Experiment management models of tourist flows (vehicle and pedestrian monitoring).

**Methods**
- Drawing up new access regulations: limited traffic; reorganisation of payment car parks; total blocking of traffic in the most vulnerable areas.
- Improving and organising services: shuttle bus service, hiring bikes.
- Implementing the «opportunity, not constraint» communication campaign.

**Results**
- New public transport services reached 13% of traffic share
- Visitor numbers remained stable; - the use of cars reduced from 93% to 82%;
- Cars arriving at the end of the valley decreased from 46% to 18%;
- The cost of the initiatives was balanced by parking and public transport fees.
Parco Adamello Brenta
Sustainable Mobility in an Alpine Area

2004-2006
• Counters (objectives figures) were employed to win difficulties with local tourist operators and local administration
• Various local municipalities requested the Park to implement similar projects
• Project extend in two more valleys

Today
• One more project rise up (train).
• The whole territory of the Park involved and approve the project
• Exchange of know-how with other Alpine Area (Paneveggio has started in 2008)
• Counters are employed to follow up the touristic trend and to build dashboard

Contact & sources
• For more information contact: Mr. Matteo Viviani, Park director, matteo.viviani@pnab.it

Parco Adamello Brenta
Sustainable Mobility in an Alpine Area
1. Tourist Flow Managements:
   • Parco Portofino: Counting Data as Daily Use
   • Parco Adamello Brenta: Sustainable Mobility in Alpine Area

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Eco-counter projects

Malaga University

To develop a methodology for the evaluation of the Carrying Capacity of Land in the Hiking Trails of a Natural Area

Where? Reserva de la Biosfera y Parque Natural Sierra de las Nieves (Andalucia)
Who? Geography Departement of University of Malaga
To develop a methodology for the evaluation of the Carrying Capacity of Land in the Hiking Trails of a Natural Area

- Land Carrying Capacity
- GIS Database (spatial analysis)
- Ecological Carrying Capacity
- Social Carrying Capacity
- Soil (fields analysis and counters)
- Fauna (fields analysis)
- Vegetation (fields analysis)
- Psychosocial Quantity (counters) and Quality (surveys)
- Economic Benefit and Lost

Malaga University
Malaga University

1. Soil Carrying Capacity

2. Fauna Carrying Capacity
3. Vegetation Carrying Capacity
   based on three indexes, Rare, Endemic and Vulnerable

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Malaga University

- **2008**
  - Project launch
  - Installation of 8 counters

- **2009 and Next steps**
  - Data collection until now
  - Firsts analysis concerning pedestrian flows,
  - Results will be published end 2010-beginning 2011

**Contacts and sources**

- For more information
- Dr. Juan Arrebola
  - Juan.arrebola@uma.es
- Source of the document: Universidad de Malaga
Who is NINA? Norwegian Institute for Nature Research

Missions:
• responsible for long-term strategic research;
• commissioned applied research to facilitate the implementation of international conventions;
• decision-support systems and management tools, as well as enhancing public awareness and promoting conflict resolution;
• 190 employees in 7 agencies spread throughout Norway.

Visitor usage of the Dovrefjell area in relation to the wild reindeer’s use.
Visitor usage of the Dovrefjell area in relation to the wild reindeer’s use.

1952
- Closed Snøheim (tourist hut) – built 1952, abandoned 2 YR later (War Area!)

1992
- Parliament tried to manage reindeer by law, controlling traffic and human activity
- Closed War Area in 1992 (but really in 2008): restoration project back to natural state
- Tried to close road to Snøheim and other roads in Dovrefjell area

2000
- Locals against removal of Snøheim and road, so parliament partially amend:
  - Snøheim given back to DNT (Norwegian Tourist Association)
  - Road not yet removed, NINA has to investigate...
  - First project in 1999-2000, but analysis not completed
Visitor usage of the Dovrefjell area in relation to the wild reindeer’s use.

2008
- Parliament: 1 M NOK (120 k€) / YR 2009 – 2012 for research aims
- 1) Wild Reindeer, 2) Flow management, 3) Social & Economy (but real needs are almost the double)

2009
- Objective: to give an as precise as possible picture of the usage of Dovrefjell-Sunndalsfjella National Park and surrounding.
- Self-register boxes (visitors are by signs on the boxes asked to answer an questionnaire)
- Automatic counters to give a good overview of visitor flow (main entrances and routes).

2010
- Cooperation with SNO (Statens Naturoppsyn) to extend the study areas (52 automatic counters)
- The main outcomes are:
  - Describing the recreational use of high-mountain areas (dynamic and spatial distribution)
  - Connecting these data to the areas’ use and the GPS position of wild reindeer.
Visitor usage of the Dovrefjell area in relation to the wild reindeer’s use.
Visitor usage of the Dovrefjell area in relation to the wild reindeer’s use.

Approx 20,000 persons enter the area at counting points

This is a very low number for such a huge area

The distribution of wild reindeer in blue, in different period of the year

The distribution of wild reindeer in blue, in different period of the year
Eco-counter projects

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Metsähallitus

How to manage all the aspects of tourists flow by using a harmonised national method

Metsähallitus, Natural Heritage Services

✓ 35 National Parks
✓ 7 National Hiking Areas
✓ 2 Wilderness Areas
✓ 8 860 km²
✓ Almost 1,8 million visitors in 2008
Metsähallitus

How to manage all the aspects of tourists flow by using a harmonised national method

Organising Visitor Monitoring in Metshallitus

- More than 800 counting sites!
  - automatic counters
  - manual counting
  - visitor points,....
- Visitor survey each 5 years
- Metsähallitus guidelines harmonised with Nordic-Baltic guidelines
- Network of expert in visitor monitoring

Metsähallitus

How to manage all the aspects of tourists flow by using a harmonised national method

The key of the success: ASTA Central Data Base System

SURVEYS AT
- protected and recreational areas
- visitor service points
- nature tourism enterprises
- nature tourism enterprises with cooperation agreement, annually

CONTINUOUS FEEDBACK AT
- visitor service points
- outdoors.fi-webpages

VISITS AT
- protected and recreational areas
- visitor service points
- outdoors.fi-webpages
How to manage all the aspects of tourists flow by using a harmonised national method

Some outputs from ASTA: national trends are possibles!

**Visitors**

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of visits to visitor centres and customer service points</td>
<td>775,000</td>
<td>795,000</td>
<td>859,000</td>
</tr>
<tr>
<td>Number of visits to national parks (34)</td>
<td>1,450,000</td>
<td>1,576,000</td>
<td>1,545,000</td>
</tr>
<tr>
<td>Number of visits to national hiking areas (7)</td>
<td>227,000</td>
<td>250,000</td>
<td>247,000</td>
</tr>
<tr>
<td>Number of visits to Oulujärvi &amp; Mäntyharju</td>
<td>1,780,000</td>
<td>2,080,000</td>
<td>2,850,000</td>
</tr>
<tr>
<td>Number of visits to group campsites &amp; interpretation services</td>
<td>92,000</td>
<td>41,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Average visitor satisfaction (scale 1-10)</td>
<td>6.27</td>
<td>6.37</td>
<td>6.27</td>
</tr>
</tbody>
</table>

**Use of visitor information in planning and monitoring**

- ASTA
- Reilaka GIS
- Statistics Finland
- Tourism business
- Research institutes
- Other information

- Strategies
- Management plans
- Planning and monitoring for sustainable nature tourism
- State of the Parks and Management Effectiveness Evaluation

**Contacts & sources**

- Thanks to the author of the document, Mrs Liisa Kajala (liisa.kajala@metsa.fi) and Joël Erkkonen (joel.erkkonen@metsa.fi)
- Source of the document: Metsähallitus 2009 Europarc Presentation
Who is PNF?
- Created by law in 2006, but became operating in 2008
- 30 people working

Missions:
- Linking and supporting the 10 French National Parks
- Managing certain shared services (improving public tenders)
- Managing national and international communications
- Sharing data and experiences

And Concerning Tourism Flows Management
- No hierarchy between PNF and National Parks
- Central role to establish guidelines

- Each 5 years, all the National Parks edit surveys (quantity and quality)
- Each Park is totally autonomous concerning methods
- More advanced ones share how

- 5 parks established a Common Protocol
- Public tender apply this guidelines

- Uni methodology and uni public tender for quality and quantity data + Heritage Management.
- Common point for all the NP: they have automatic counters (average 15 per parc). The first step to build a national database could be easy.
Parc Pyrénées:
- 206 300 ha
- 40 000 habitants
- Most important sites: 6 valleys each one with his specificities

Central Database Case study: Parc des Pyrénées
Central Database Case study: Parc des Pyrenees

- They started surveys in 1996
- Each 5 years collect a huge number of quantity and quality data:
  - Visitors center points (8 points)
  - Car counting (18 sites)
  - Parking’s (19 sites)
  - Pedestrian counting (21 sites)
  - Mountain hut (15 points)
  - Surveys
Central Database Case study: Parc des Pyrenees

2010
- Centralize quantity data through Eco-visio, the Web Platform
- Produce a clear and simple report for every park employee

2011
- Widgets (Real-time Data)
- Seasonal Reports for Local Authorities and local travel agencies (consolidating partnerships)
Central Database Case study: Parc des Pyrenees

Parc Nationaux de France

Daily frequation (%)

Hourly flow in an average week

User type distribution

Weekly flow (from 8/4/2010 to 19/5/2010)

Parc Nationaux de France

Central Database Case study: Parc des Pyrenees

for the love of bicycle culture
copenhagenize.com

How Many Bicycles?

27 MAY 2010

11,402,080

CYKELHELMET: HER 1 VERDEN'S SIKKESTE CYKELLAND
COPENHAGENIZE ON TWITTER

Moder数i ambition that can't be answered. (8 pm to 10:30. First, my friend at Shinko's, who took these
pictures. Then a lot of students from the art school.
And More……..

Drawienski Park Narodowy

Bonifacio – Lavezzi Island – Acces Management

And More……..

Drawienski Park Narodowy
And More……..
Czech-Swiss National Park

And More……..
Many thanks for your attention!