

# Environmental planning for sustainable tourism in Koli NP and in partner enterprises



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# Environmental planning in Koli National Park

- The aim is to create a Sustainable Tourism Plan for the Koli National park and resort.
- Planning is the tool to decrease the harmful environmental impacts of national park tourism and enhance the positive ones.
- The environmental planning consists of five sub plans for the park itself and several specific environmental plans in co-operation with partner enterprises/associations.



# The modules of environmental planning in Koli Resort



In addition to these plans related to developing sustainable tourism in Koli National Park, EU-funded Life to Koli- project has made and is implementing a management plan targeting increases in the natural biodiversity of the park.



# Example: Energy management plan

- The current situation of energy use in the NP has been looked into to get baseline information for the management plan.



# Energy consumption in the NP 2004

- Electricity 2 280 000 kWh, ~ 2300 MWh
- Heating oil 150 000l, 1500 MWh
- Consumption of heating wood 100m<sup>3</sup>
- Gas consumption 5-10 bottles
- Home-work travelling 120 000km
- Work related travel 20 000 km with NP equipment, private cars ? (at least another 20 000km annually)
- Energy consumption of tourists? (will be calculated from visitor surveys)



# Electricity consumption in Koli National Park

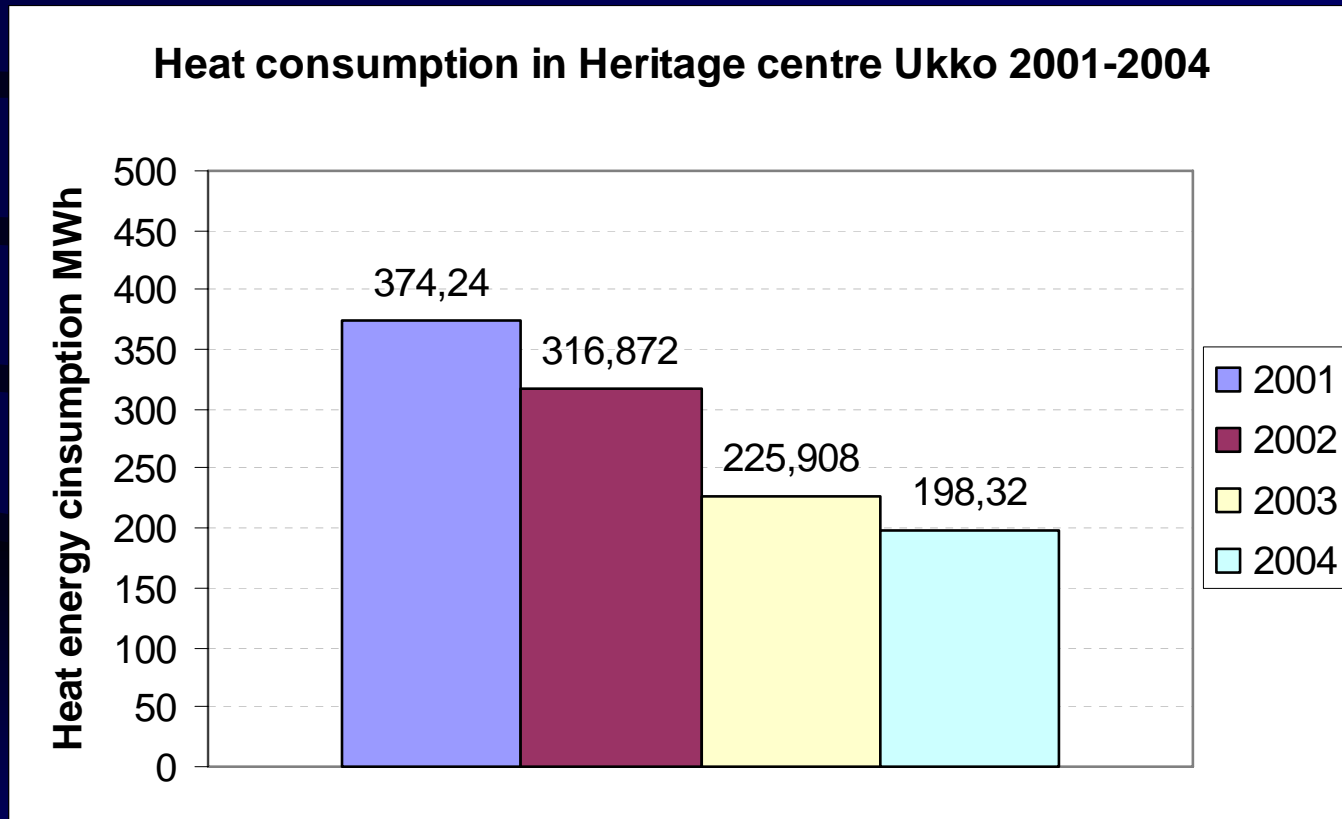
Calculated with 2004  
numbers, except for the  
hotel 2002 numbers.



| Place of consumption   | annual consumption<br>kWh |
|------------------------|---------------------------|
| Heritage center Ukko   | 112 535                   |
| Radio House            | 23 000                    |
| Alamaja House          | 48 855                    |
| NP office              | 48 500                    |
| Ryynänen Culture House | 66 130                    |
| Jero cottage           | 10 190                    |
| Pärnälahti cottages    | 4 792                     |
| Ollila house           | 1 781                     |
| Seppälä/Lakkala houses | 270                       |
| total                  | 316 053                   |
| Hotel Koli (2002)      | 1 016 385                 |
| Slope cafe (2002)      | 584 310                   |
| Skiing cente (2002)    | 313 020                   |
| Elevator from parking  | 26 500                    |
| total                  | 1 940 215                 |
| Harbour (pier)         | 10 000                    |
| Fish treatment plant   | 14 400                    |
| total                  | 24 400                    |
| <b>All total</b>       | <b>2 280 668</b>          |

# Oil consumption in Heritage centre Ukko

Total annual consumption of 150 000 liters of heating oil. Hotel uses 1250 MWh and the Heritage centre 200MWh.



# CO<sub>2</sub> emissions from energy use

|  | CO <sup>2</sup> emissions, tons |
|--|---------------------------------|
| Heating&Electricity                      |                                 |
| Electricity, Turku Energy                | 9,8                             |
| Electricity, PKS                         | 980,7                           |
| Oil heating, Ukko-Koli serv. cent.       | 398,5                           |
|  |                                 |
| Transportation                           |                                 |
| home-work travel                         | 19,6                            |
| work transport with NP vehicles          | 7,5                             |
| work transport with employeers' vehicles | ?                               |
|  |                                 |
| Travellers (100 000 persons anually)     | ?                               |
| Travelling                               |                                 |
| Accommodation                            |                                 |
|  |                                 |
| <b>Total</b>                             | <b>1416,1</b>                   |

# Examples of actions to reduce environmental impacts of energy use

- Shifting to purchase 'green electricity', extra cost for 88 500 kWh, 500 e/year.  
→ CO<sub>2</sub> reduction 13 tons year.
- Building a wood pellet heating plant to Ukko-Koli service centre, cost 125 000e  
→ CO<sub>2</sub> reduction ~ 400 tons year.
- Buying a new more energy efficient car to the parc, cost 30 000e.  
→ CO<sub>2</sub> reduction ~ 3,5 tons year.



# Time of repayment of the Pellet burning plant

| Heat Energy consumption in Ukko-Koli service centre |            |                |             |                             |
|---|------------|----------------|-------------|-----------------------------|
| MWh   | Price, oil | Price, pellets |             |                             |
| 1450  | 58739,5    | 36322,5        | 22417       | annual saving in fuel price |
|   |            |                | 1000        | lubricants a                |
|   |            |                | 2000        | mainteinance and repairs a  |
| investment  | 125 000    |                | 19417       | annual saving after costs   |
|   |            |                | 6,437657723 | repayment time              |



# Draft time frame for actions

| Action   | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|------|------|------|------|------|
| Buying green electricity   |      |      |      | ■    |      |
| Pellet powerplant  |      |      |      | ■    |      |
| Air warmth pump  |      | ■    | ■    | ■    |      |
| Energy saving  | ■    | ■    | ■    | ■    |      |
| Considering energy savings in new investments                            | ■    | ■    | ■    | ■    |      |
| New car  |      |      | ■    | ■    |      |
| Making a technical mapping of<br>Heritage centre energy losses           | ■    |      |      |      |      |
| Better info on public transport for the visitors to<br>the web, updating | ■    | ■    | ■    | ■    |      |

# What is the current situation of the planning process in the NP?

- The water management plan targets the quality of drinking water offered in the park and is already partly in implementation (increased control of quality).
- Waste management plan is nearly complete and the energy management plan in good progress.
- Path erosion is currently surveyed.
- Some of the key structures concerning special groups have been evaluated by a team of experts and customers (hindrance-free nature tourism).



# But a lot of work still remains...

- Some base work has been done in safety and environmental education issues in other projects, but these two will still need a lot of work.
- The path erosion survey is completed this autumn if weather is favourable. The information is then coded in GIS form.
- The aim is to complete all sub plans and make an English summary of them for applying for the EUROPARC STC-ecolabel by march 2006.



# Co-operation with partner businesses and associations

- To be able to efficiently target environmental impacts of natural park tourism it is essential to get the businesses and associations operating in the park to join to the process.
- Koli Natural Park offers environmental consultation and planning to help the partners.
- In practice this means surveying the main environmental impacts of each business who will to join the process and finding practical solutions to how the negative impacts of performance could be decreased and positive ones increased.
- The process is kept as close to earth as possible. Possible means are for example concrete ways of how to recycle, save energy and water or offer environmental information to customers.



# Co-operation with partner businesses and associations, current situation:

- Of the approximately 250 enterprises/associations connected in some way with Koli NP, 10 have committed to join and about 10 are still considering.
- Of these 4 consultation sessions have already been done.
- Businesses/associations from versatile fields. Majority are accommodation and guiding service businesses. Separation is difficult since many businesses produce/offer several products/services.
- The scale of the businesses varies also. From Hotel Koli, which is the biggest player, to small one person entrepreneurs.



# Environmental planning with Hotel Koli

- The biggest tourism business of Koli area with approximately 95 000 customers. Owned by PKO, North Karelian cooperative shop.
- Has committed to environmental planning, but work is only in the beginning.
- Has appointed a person responsible of environmental issues, which essential as we are interested in also implementing the plans.
- Hotel has recently worked in getting an eco-label for the restaurant. Has also an environmental strategy from 2000.



# Co-operation with partner businesses and associations, current situation

- Also some businesses outside the Koli area have joined. Two of them supply products to Nature Shop Vakka, one produces guiding material.
- Many enterprises/associations find environmental issues important, but taking part in the planning process is often hindered by having too little time or seeing the cost of participating in the project as too big (100e). Also the view that since the business has so little environmental impacts or everything is already 'done right' are reasons not to participate.



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