



AIR QUALITY MONITORING IN IMATRA AND SVETOGORSK

- CROSS-BORDER COOPERATION
- SOUTH KARELIAN NETWORK

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Imatra and Svetogorsk

- small towns: 30.000 and 17.000 inhabitants
- cross-border neighbours
- same kind of industry: pulp and paper mills
- same air contaminants: sulphur (SO₂ and TRS)



South Karelian Air Quality monitoring network

- area of Imatra, Joutseno, Lappeenranta and Svetogorsk
- 23 measurement stations (placed mainly near industrial plants and traffic)
- 11 automated stations (continuous measuring)
- about 20 analyzers
- by Environmental Department of the town of Imatra



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eKarjala > Ympäristö > Ilmanlaatu

ETELÄ-KARJALAN ILMANLAATU

Ilmanlaatu 22.11.2004 klo 15.00-16.00

Ilmanlaatuindeksit on laskettu tarkistamattomista mittaustiedoista.

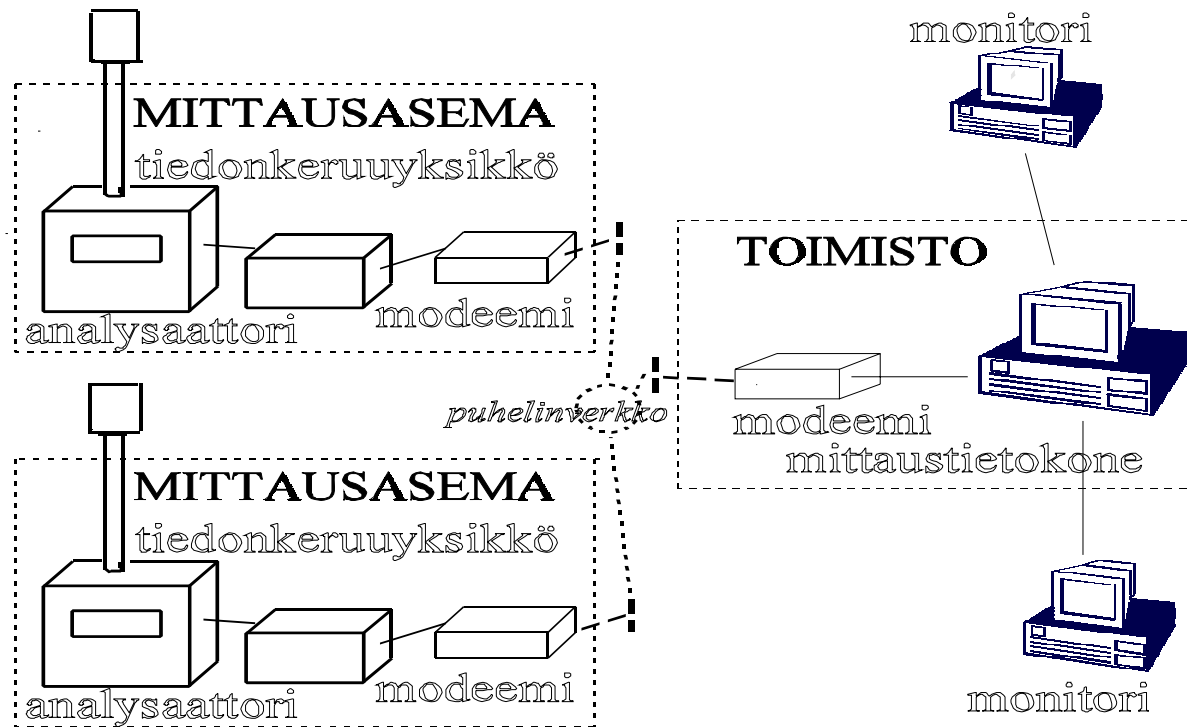
Tuuli Joutsenossa: 1.4 m/s S



The area of South Karelian Air Quality Monitoring Network



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The automated Air Quality monitoring system (using DILTA software)



Measured contaminants

- SO₂, TRS, NO, NO₂ and PM₁₀ are measured continuously (real time data)
- TSP and deposit (several contaminants) are first collected and then analysed in laboratory



Reporting (in South Karelia)

- **monitors** for local authorities (real time data)
- Air Quality Index data (updated every hour) via **Internet**: www.imatra.fi ; www.ekarjala.fi ; www.ytv.fi for public and media
- twice a week in two local **newspapers** (Index) for public
- announcements in **local radio** for public whenever needed (in case of high concentrations)



...reporting

- **monthly reports** for the local environmental authorities and industry
- **once a year a comprehensive report** for media, authorities and scientists
- the results are delivered once a year to the national database maintained by the Finnish Meteorological Institute

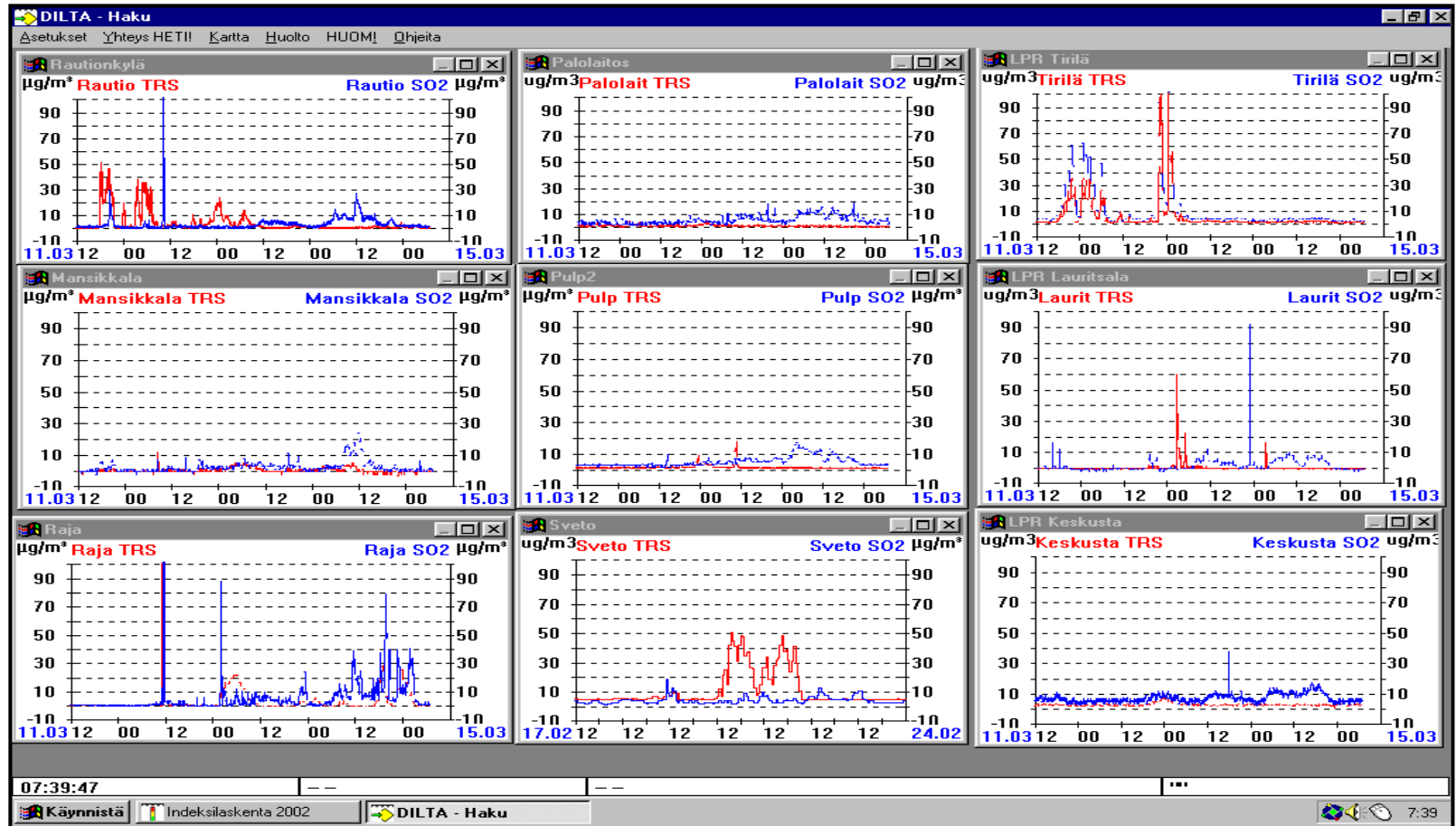


Reporting in Svetogorsk

- **weekly, monthly and annual reports** for the client (International Paper)
- the results of measurements in Svetogorsk are published in the South Karelian Air Quality comprehensive report once a year
- no information service for the public



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Monitor window (user interface - DILTA): Air quality information for local authorities and industry (experts)



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http://www.ekarjala.fi/ymparisto/ilmanlaatu/ - Microsoft Internet Explorer - toimittaja Imatran kaupunki

Tiedosto Muokkaa Näytä Suosikit Työkalut Ohje

Edellinen Etsintäsivu Suosikit Sivuhistoria

Osoite http://www.ekarjala.fi/ymparisto/ilmanlaatu/ Siirry Linkit

MAAKUNTAPORTAALI 15.3.2004

eKarijala > Ympäristö > Ilmanlaatu

ETELÄ-KARJALAN ILMANLAATU

Ilmanlaatu 15.03.2004 klo 05.00-6.00

Ilmanlaatuindeksit on laskettu tarkistamattomista mittausiedoista.

Tuuli Joutsenossa: 0.3 m/s S

Ilmanlaatu

- Hyvä
- Tyydyttävä
- Välttävä
- Huono
- Erittäin huono

Mittauspisteet Teollisuuslaitokset

Imatran kaupunki, ympäristönsuojelutoimisto,
puh: 681 4301, 681 4319,
e-mail: ymparistotoimi@imatra.fi

Käynnistä Lähetetyt - Microsoft Outd... http://www.ekarjala.fi... 7:39

Internet (www.ekarjala.fi): Air quality information for local people in South Karelia

www.Imatra.fi



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YTV - Ilmansuojelu - Microsoft Internet Explorer - toimittaja Imatran kaupunki

Tiedosto Muokkaa Näytä Suosikit Työkalut Ohje

Edellinen → → → Etsintäsivu Suosikit Sivuhistoria

Osoite <http://www.ytv.fi/ilman/nyt/etusivu.phtml> Siirry Linkit

Suosikit

Lisää... Järjestä...

- Leikkilä
- LIISA
- LOMALLE
- Me Naiset - kotisivu
- MSN.com
- MTV3 Internet - Sää
- MTV3 Internet - Uutiset
- Phuket Maps - Thailand map guide
- Posti - Netposti
- Radioasemaopas
- Ray
- Sihteerin hyötysivut
- Sirkus Webikortit
- Sonera apu, ServiceDesk
- sonera finder
- Sonera Plaza - Sähköpostihaku
- Säteilyturvakeskus - STUK
- tekstiviestit netin kautta
- Valtion SÄÄDÖSTIETOPANKKI - FINLE...
- Ympäristöhallinnon www-palvelu
- Ympäristötoimen kotisivut
- YTV - Ilmansuojelu
- eKarjala - Ympäristö - Hallinta
- R y h m i x
- VAHTI
- YTV - Ilmansuojelu ilmanlaatu nyt
- Alkuaineiden jaksollinen järjestelmä
- www.fi

YTV **ILMANLAATU NYT**

Päivitä kuva

15.03.2004 kello 09.00

Erittäin huono

Huono

Välttävä

Tyydyttävä

Hyvä

Katso kaupunki-kohtainen tilanne klikkaamalla kaupunkia kartalta

Ilmanlaatuindeksin tarkempi selitys

Vaasa Kuopio Tampere Lappeenranta Pääkaupunkiseutu Turku

Ilmanlaatu mitataan Suomessa noin 40 paikkakunnalla. Mittauksia suorittavat sekä kaupunkien ympäristöyksiköt että teollisuuslaitokset. Ilmatieteen laitos mittaa ilmanlaatu pääasiassa tausta-asetilla, kuten saaristossa ja Lapissa. Ilmanlaatu tiedotus on noussut yhä tärkeämpään asemaan viime aikoina. Tiedon halutaan olevan reaaliaikaista ja helposti ymmärrettävää. YTV:n ympäristötoimisto on

Valmis

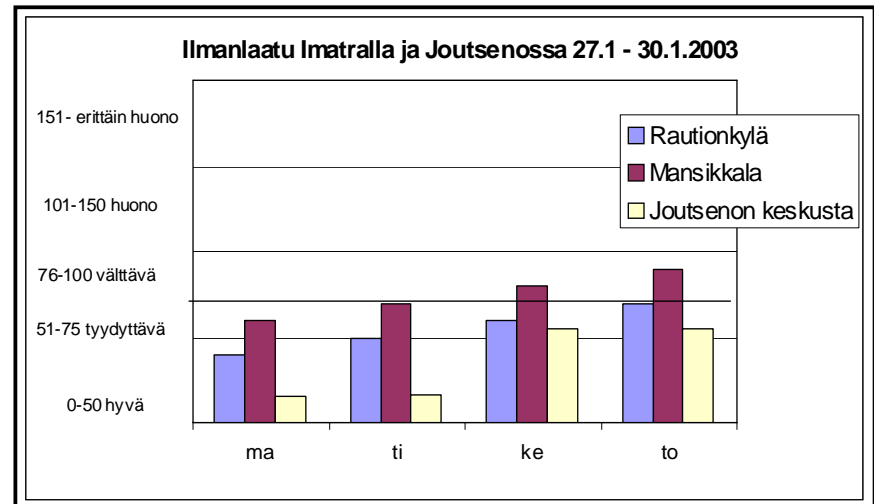
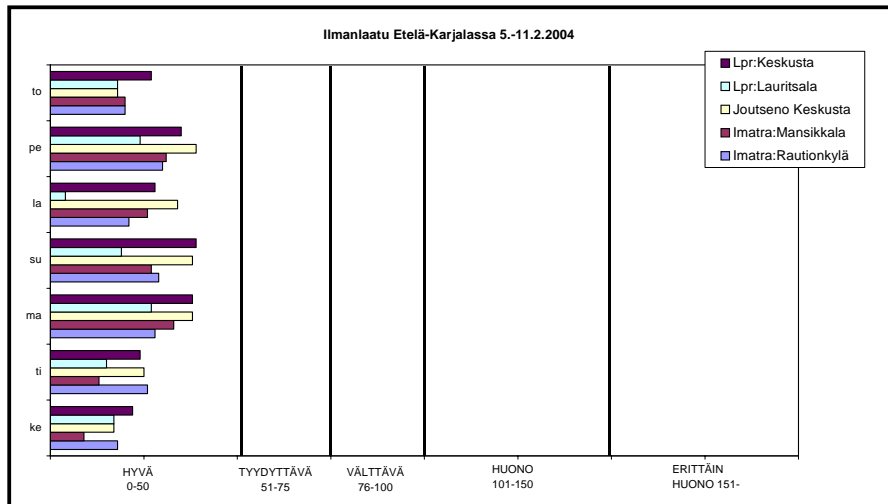
Käynnistä Lähetetyt - ... 2003Esite il... 2003lyhenn... kuva ytv ind... YTV - Ilma... 9:26

Internet (www.ekarjala.fi): Air quality information for public in Finland

www.Imatra.fi



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Local newspapers: Air quality information for local people in South Karelia

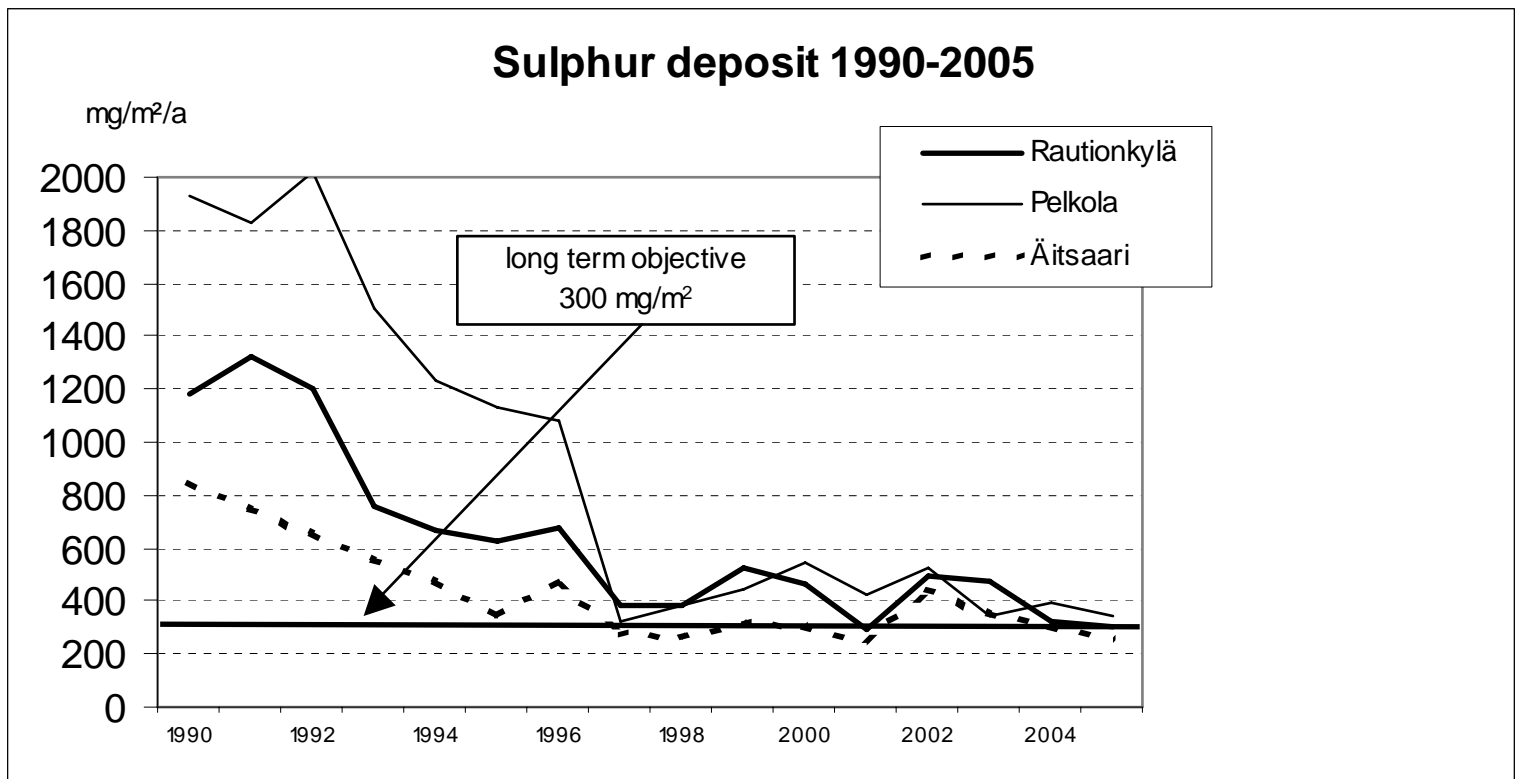


Financing

- three municipalities: Imatra, Joutseno, Lappeenranta
- local industry
- International Paper OAO Svetogorsk payes all costs in Svetogorsk (since 1999)



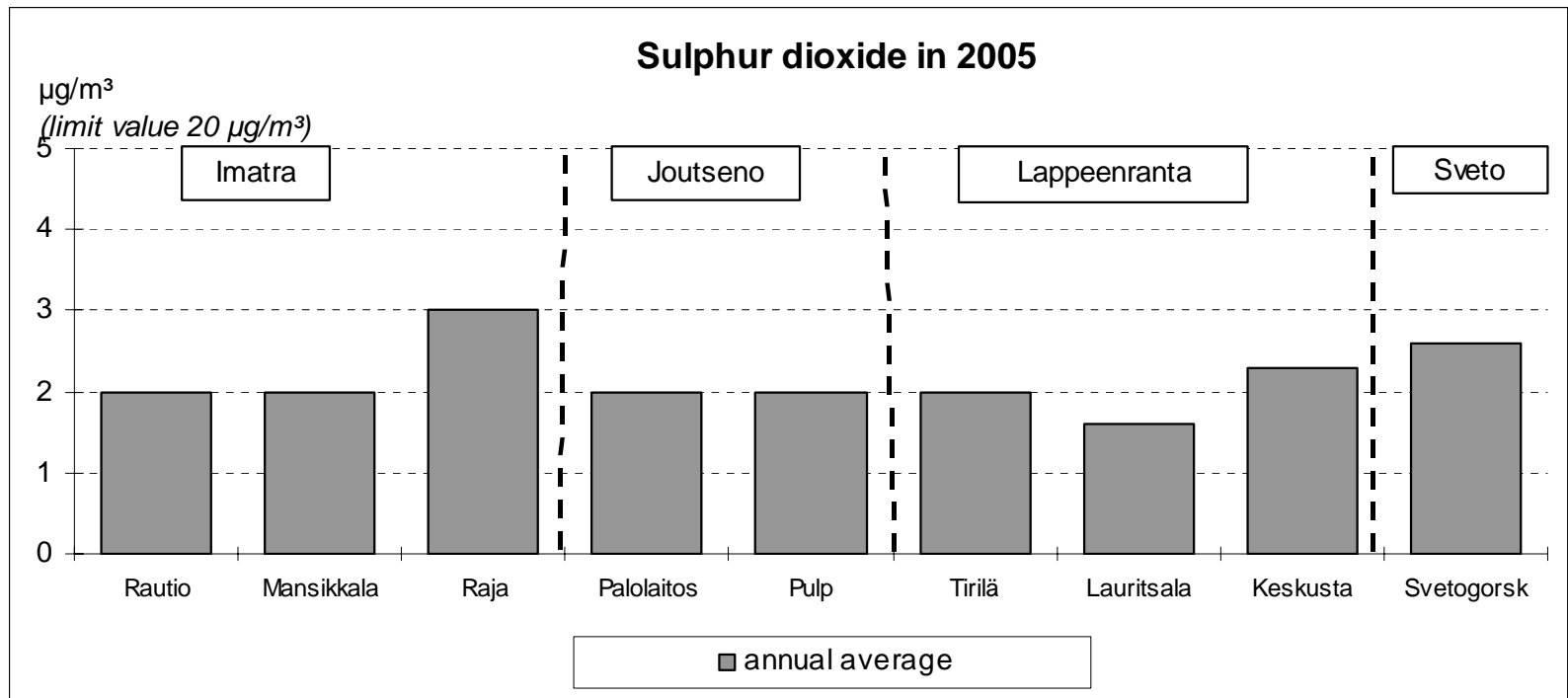
Air quality in Imatra and Svetogorsk – a short review



Sulphur in rain water 1990 - 2005



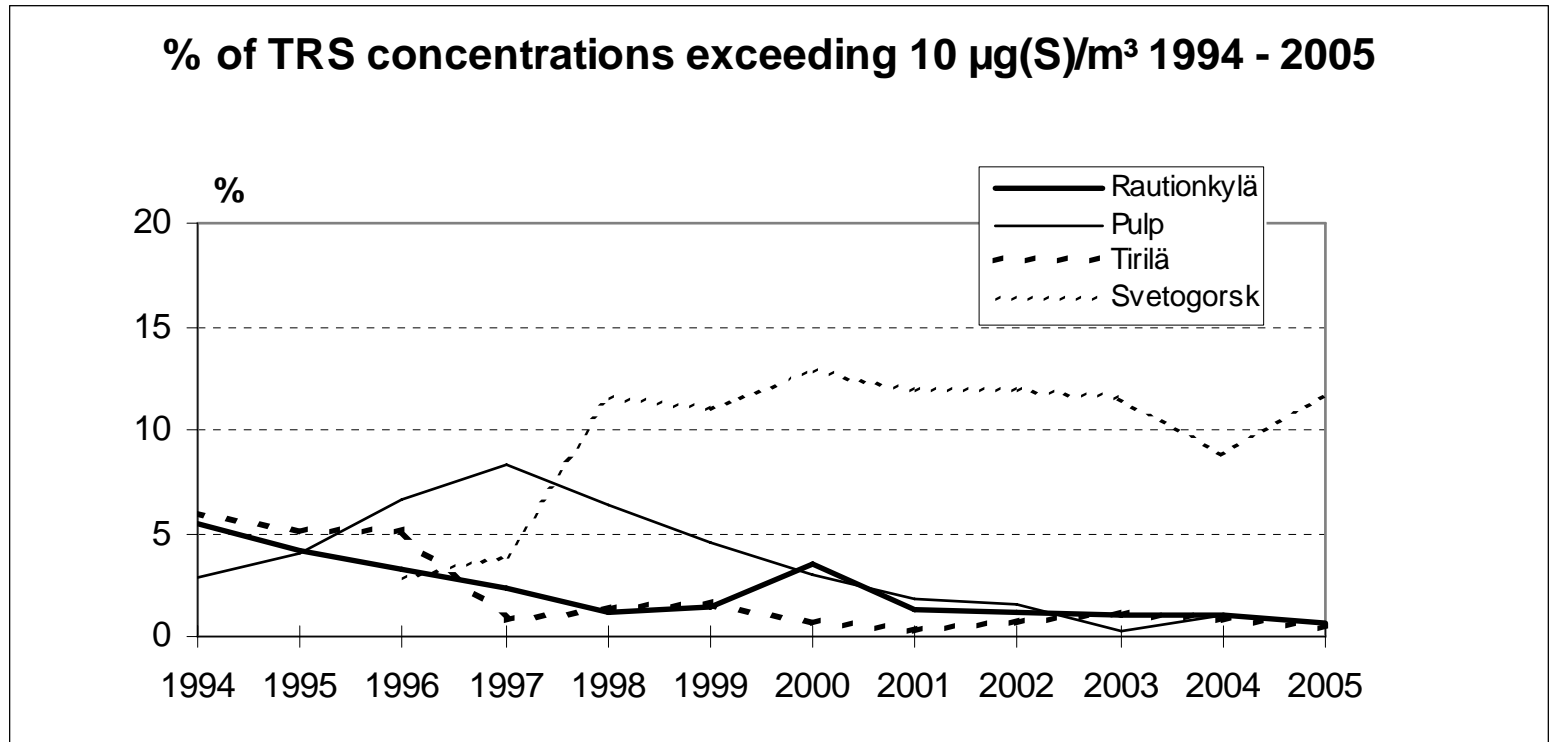
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SO₂ concentrations in 2005



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% of TRS hourly concentrations exceeding $10 \mu\text{g(S)}/\text{m}^3$ 1994 - 2005



Cross-border Cooperation in Air Quality monitoring

- Started in the late 1980's. The SO₂ measurements were started in Imatra and in Svetogorsk as a part of a larger Air Quality Evaluation project. From Finland there were two project partners: the town of Imatra and South Karelian Allergy and Environmental Institute. From Russia there was mainly one partner, a local hospital (representing the town of Svetogorsk).



... cross-border cooperation

- After the project, the SO₂ – analyzer was placed into the hospital building in Svetogorsk. The measurements were totally payed by the town of Imatra.
- In the middle of the 1990's the analyzer was moved to another place in Svetogorsk. The new measurement "station" was in fact a room in a laboratory building owned by OAO Svetogorsk. However, the costs were still payed by the town of Imatra.



... cross-border cooperation

- In 1996, Swedish Tetra Laval Ltd. bought the OAO Svetogorsk mills. A contract of carrying out the SO₂ / TRS - measurements was made between Tetra Laval and the town of Imatra.
- In 1998 - 2000, there was an EU funded project for enlarging the ambient air measurements in Svetogorsk and on the border region. Project partners were Tetra Laval OAO Svetogorsk and the town of Imatra.



... cross-border cooperation

- In 1999, measurements also for NO, NO₂ and PM₁₀ were started in Svetogorsk. A new measurement station, which met the Finnish quality standards, was established. Since then the quality of the measurements has been at the equal level with the rest of the South Karelian network.
 - A Contract with International Paper (the new owner of OAO Svetogorsk). Since 1999, the total expenditures of the ambient air quality measurements carried out in Svetogorsk were payed by International Paper Ltd.



... cross-border cooperation

- What have we learned, if any?
 - personal contacts are important
 - you must have a powerful partner in Russia
 - funded projects (by EU) are a good way to get started
 - common language (or at least a good interpreter) helps a lot
 - customs regulations may change, transportation of equipments is not always so easy



... cross-border cooperation

- ... What have we learned, if any?
 - crossing the border may take a long time...
 - the measurement station must be equipped against robberies and mischief
 - electricity may cause problems, uninterruptible power systems (UPS) are needed
 - *however, people are the same everywhere and everything is possible*