

## COST Action E48 “Limits of paper recycling”

(continued from June edition)



Prof. Harald Großmann, Vice-Chairman of the Action

E48 has – in many aspects – been a unique COST Action. As basically all Cost Actions it's background was a huge number of nationally funded research projects, in our case – from 18 countries. But E48's activities were not restricted to a mere exchange of the results of these projects. We tried to deduct questions beyond those which had already been answered by past research. And what we learnt was that there were many. That's why we felt it was necessary to do some own research – though it was not financed by COST. For that purpose the steering group, the task groups as well as the working group leaders distributed homework to all participants – and they checked if this homework had been properly done (which almost always was the case).

What we found was much uncertainty, a lot of new questions – but as well a number of answers which

we believe are worth to be listened to.

The group developed a number of **strategic recommendations** for the paper industry and the paper value chain, as there are

Increase consumers' environmental awareness and develop a strategy to fight the energy menace!

Increase awareness that forests and used paper and board (P&B) products (urban forests) both play an important role in the management of atmospheric CO<sub>2</sub>!

Increase particularly the awareness that:

- used P&B and wood are far too valuable to be burned as the first option
  - P&B is to a very large extent produced on the basis of recycled or renewable raw materials. P&B industry is one of the oldest and biggest recycling industry in the world
  - a good balance between virgin and recycled fibres aiming at maximizing recycling is the prerequisite for sustainability
- Take control of the recovered paper (RP) supply chain and install convenient collection systems:

- to avoid co-mingled collection
- to improve or secure RP quality in terms of cleanliness

Develop ideas for locally adapted collection strategies taking into account the structure of the local paper industry.

Be transparent as far as economics of recycling are concerned.

Think about rewarding the owners of used P&B directly or indirectly.

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## CALENDAR OF EVENTS



*Have a nice summer holiday!*

15–17 Sep 2009

**RWM Exhibition**  
(Recycling and Waste Management)  
Birmingham/UK

17/18 Sep 2009

**FEICA European Adhesives and Sealants Conference**  
Budapest/Hungary

6 Oct 2009

**INGEDE project meeting**  
125 08 CTP  
“VALOBA”  
Grenoble/France

7/8 Oct 2009

**INGEDE Seminar**  
“Paper Recycling—a necessity of today's paper loop”  
San Lorenzo de El Escorial

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Working Group „Recovered Paper Quality“ (page 3)



Improve the mutual understanding of the respective possibilities and limitations.

Make recyclability an important criterion for the design of paper products.

Reduce the ecological footprint of the whole value chain.

## Recommendations for research needs which should be addressed in the near future

Development of a comprehensive and sympathetic understanding (LCA) of paper and board along the whole paper value chain from forest to final grave, which should include:

and more energy efficient separation techniques for RP treatment

- Identification and development of more efficient techniques able to upgrade or regenerate the properties of recycled fibres
- Research on improving the compatibility of printing and converting processes and materials with existing and future recycling processes

## Future activities

As announced earlier we will synthesize all findings of E48 in a book which will be published with financial support from COST – within a year at the latest. We will as well maintain our webpage for at least another five years.



Plenary meeting of COST E48 in Iasi, Oct. 2008

Engage – far more than in the past – in an open dialogue with clients and their supply chain in order to better influence the recyclability of their products:

- in order to safeguard the quality level of recycled pulp
- in order to keep pace with new developments in the printing and converting industries
- to further decrease the environmental footprint of their processes

Don't delegate the improvement of existing and the development of new recycling technologies entirely to your suppliers.

Develop ideas how papermills can maximise the potential of their recovered paper based raw materials – even beyond paper:

- To maximise the separation of fibres suitable for paper making
- Extract any high-value components from the residues of the recycling processes for further utilization
- Utilize existing and develop new process to utilize the potential of the remaining residues including energy

- The environmental impact (ecological footprint) of the production processes
- The carbon footprint of both processes and products
- The water footprint of P&B products
- Collection of more reliable and complete statistics on recovered paper streams by grades in order to be able to forecast future availability
- Development of more selective and more energy efficient separation technologies
- Improvement of the energy-efficiency of P&B recycling through improved or new processes
- Development of concepts for an urban (RP based) bio-refinery including research on bio-chemical and thermo-chemical processes for residues
- Development of tools for the identification of the economically and environmentally reasonable level of recycling for a given product taking into account specific conditions of a paper mill
- Development of more selective

And – no matter how difficult this might be – we will keep trying to convince the Committee of COST Domain “Forest, its Products and Services”, – i.e. those who decide what topics are worth to be dealt with in the frame of future COST Actions – that there is a paper industry which has some research needs.

## Additional effects

COST E48 was not just another COST Action. Admittedly in some cases it was hard work, but in (almost) all cases the members enjoyed to work together. And it was a real European co-operation in which a strong network was further developed, in which the members learnt a lot about the expertise, the facilities and the research focus of their colleagues all across Europe.

Agreements for further cooperation – beyond the action – were agreed upon – and already put into action. Exactly this is what Europe needs, what COST is aiming for and what – in our particular case – is needed in order to maintain and possibly extend Europe's leadership in paper-making.

Harald Großmann

## Italian Flexo Round Table – Gruppo di lavoro stampa flessografica

On June 23 Ingede has organised the first Flexo Round Table in Italy. The meeting, held at Stazione Sperimentale Carta (The Italian Paper Research Institute) in Milano was the first one at country level and a good opportunity to restart a discussion that lately has been neglected in the agenda. In fact, already one year passed from the last meeting of the CTP Flexo Task Force. The discussion was chaired by Dr. Graziano Elegir, INGEGEs Italian Country Representative, who pointed out in the introduc-

tion the importance of making a decision on how to go on with the implementation of the improved inks at industrial scale. All main actors in the field (Burgo, Cerutti Groups, Flint, Huber, Selpi and Sun Chemical) attended the event witnessing that the perception of the issue is still alive. Nonetheless, the present economic conjuncture has clearly influenced the discussion. Selpi group reported a significant decrease of their printed volumes and according to Cerutti there is no forecast of new

installations for newspapers neither in Italy nor in Europe for the near future.

All parties presented their view point, particularly, Selpi group stated that is not ready to shift towards the use of improved inks due to their higher costs for maintenance during printing operations. The group has decided to meet again at the end of the year to monitor the present market trends and the development of the flexo share in the country.

*Graziano Elegir*

## INGEDE Working Group „Recovered Paper Quality“

### Meeting and mill visit at WEPA Müschede mill



*Members of the working group visiting Müschede mill*

The latest meeting of the working group Recovered Paper Quality was held at WEPA in Müschede (Germany) on 28-29 April 2009. WEPA as a producer of tissue based on deinked pulp joined the INGEDE in summer 2008. Thus the working group would like to express its special thanks for the invitation.

The main topic on the agenda was the revision of the recovered paper grade list EN 643. INGEDE is representing the deinking industry on an international level while CEPI is discussing that item with ERPA and FEAD. A small task force worked up a proposal from the deinkers' point of view for the working group's meeting.

With the input of the group Andreas Faul and Manfred Geistbeck were in a position to prepare a good basis paper for the discussion on the next CEPI meeting.

As usually the development in recovered paper quality was discussed based on the comments from mill



*WEPA Müschede mill*

side, on a first feedback from the annual questionnaire for 2008 and on the latest results from the INGEDE Project 126 08 "RP Quality". The next meeting will be hosted by Stora Enso Eilenburg. It is scheduled for 13-14 October 2009.

*Manfred Geistbeck*



**COST E48 Action's book**  
**The Future of Paper Recycling in Europe**  
***Opportunities and limitations***

printed in autumn 2009

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