The Making Of Sustainable Dredging Equipment

Eco-friendly Dredging in the Modern World
13 - 14 October 2009
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Historic Timeline IHC Merwede (1642 – present)
1697 Peter the Great in Zaandam & Amsterdam
Contents

• Introducing Sustainability
  Our background, definition & approach

• Two Questions
  Is it new?
  Conflicts or opportunities?

• Our Focus Today

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Background

- **Growing Awareness**
  regarding the effects of human activities in the ecosystems

- **Increasingly Demanding Legislation**
  - Materials Used in Production
  - Energy Use and Emissions
  - Dredging Operations (turbidity, lubrications, precision, noise)

- **IHC Merwede’s Responsibility**
  The Sustainable Design and Manufacturing of Dredging Equipment.
  This as a Basis for Sustainable Dredging.
Definition & Approach

Definition: Brundtland
“provide the needs of the present generations without compromising the capability of the future generations to meet their needs”

Approach (1): People, Planet & Profit
“we will do what has to be done plus actively seek mutual benefits”
Approach (2)

- Long term research program
- Cooperation with all stakeholders
- Multidisciplinary approach
- Consulting experts
- Participation in EcoShape’s Building with Nature

External players

- Suppliers
- Dredging contractors
- Experts
- NGOs
- Education and Research Institutions
- Government

IHC Merwede-wide program

- Definition
- Inventarisation
- Eco-Shape: Building with Nature
- Knowledge development
- Case studies
- Sustainable Products and Processes

Pilot projects / demo-models/ prototypes
Design guidelines / decision support tools
Two Questions

1. Is it New?
2. Conflicts or Opportunities?

People versus Planet versus Profit
or
People, Planet & Profit
Is it new? & Conflicts or opportunities?
Is it new? & Conflicts or opportunities?
Is it new? & Conflicts or opportunities?

1950s 2009
Is it new? & Conflicts or opportunities?

1980’s  2009
Is it new? & Conflicts or opportunities?
Our Focus Today

- Developing Sustainable Equipment
- Reducing Turbidity
- Reducing Energy Use and Emissions
- Increasing Awareness
Developing Sustainable Equipment - 2009
Developing Sustainable Equipment - 2009
Reducing Turbidity

- Precise dredging
- High density dredging
- Redesigning overflow systems
- Participation in EcoShape’s programme Building with Nature
Reducing Energy Usage & Emissions

- Continue to reduce energy usage
- Alternative power generation
  Wärtsilä: 500kW fuel cells by 2010
- Emissions are COx, SOx, NOx… & underwater noise

Could this be the solution?
Increasing Awareness!
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Conclusions

• Long term programme/commitment – first steps made
• It is not new, it is another perspective!
• A pro-active attitude reveals many opportunities
• Main achievements so far follow from: Knowledge, Experience & Awareness!