

"Dear reader

*It is my great pleasure to offer you the first Cradle to Cradle Islands project Newsletter. With the Newsletter we want to inform you regularly about project developments. The C2CI project is led by the Province of Fryslân and carried out together with partners in six countries around the North Sea as part of the European Interreg IVB North Sea Programme. After its start at The Hague Nieuwspoort Press Centre the project has enjoyed a great deal of interest on the part of the media, commercial companies and other organisations that are interested in the C2C principle. Many news websites reported on this project, not only in the Netherlands and Europe but also in numerous other places in the world – from the USA to India! Naturally we will use all these reactions to expound the innovative aspects of this unique project and to mobilise*

*funds to give a permanent character to the results that this project will yield in the sphere of water, energy and materials. Full attention will also be paid to education on sustainable and C2C solutions. In this respect the islands and their many thousands of visitors a year will provide an ideal show case to spread these ideas. C2C effervesces and we will see to it that it will continue to do so for some time yet!*

*If you would like to get more information or if you think you might contribute in some way do visit our website and do not hesitate to contact us."*

On behalf of the C2CI project team,  
Hans van Meerendonk,  
project coordinator



## C2CI kick-off at Nieuwspoort Press Centre

On 12 February and attended by the press, politicians and interested parties the starting signal was given for the European Cradle to Cradle Islands project. Ten islands from the North Sea region will take part in this project. The twelve other partners are regional authorities, knowledge institutes, environmental agencies and district water boards.

The next four years € 3.5 m. will be available for various pilot projects in the realm of sustainable and innovative solutions for water, energy and waste. Wherever possible the cradle to cradle principle will be applied. Wetsus Water Technology Institute at Leeuwarden will be the coordinator for the water activities, Delft Technical University will coordinate the energy component and the EPEA knowledge institute of Michael Braungart, the founding father of the cradle to cradle philosophy, will deal with the subject of materials. It is definitely the intention that already in the course of the

project the results from the pilot projects will be turned into structural, sustainable solutions. To this end subsidy funds will be applied to and it will be tried to arouse the interest of investors.

The Frisian Provincial Executive Mr Galema said in The Hague that he was pleased that the Province of Fryslân was to be the leader of this ambitious project with partners from the Netherlands, Norway, Sweden, Denmark, Germany and Great Britain. "Through this project the North Sea islands are going to be a testing ground for sustainable innovations in the realms of water, energy and waste. These pilot projects will bring about a snowball effect. Not just in the Netherlands but with global applicability" Mr Galema said.



WATER



ENERGY



MATERIALS



## C2CI Partners meet at Leeuwarden

The complete C2CI partnership met for the first time at Leeuwarden at the end of February. Representatives of the islands gave presentations of the situation on “their” islands and noted that there were many similarities. Irrespective of the regional differences practically all the islands are flooded by tourists in the summer season with a corresponding explosive rise in the demand for water and energy. There is also an almost universal wish for independence from mainland sources and a great interest in sustainable solutions.



The knowledge partners too presented their plans. Aalborg University is going to map out the present situation on the islands. Delft Technical University showed plans for an ‘eternal holiday house’, electric scooters with charging stations and a bicycle made from the raw materials: wood, flax and thistles. Wetsus sketched the possibilities of ‘blue energy’ (energy from the potential difference between salt and fresh water), the reclaiming of useful materials from waste water, the buffering of autumnal and winter rainwater for use in summer and systems for separating water flows in homes.

Braungart intimated that he was only too pleased to be involved in the project. “An island is a perfect microcosm to clarify things. By experimenting with new solutions in the realms of water, energy and materials you can astonish people by showing what may well be possible in the future. Take for instance plastic, in contrast to the often toxic plastics that pollute the seas at present you can also produce plastics from natural materials. These dissolve when they come into contact with water and may serve as food for fish. From such bioplastics you can make for instance ‘healthy’ toys. In that way the islands might become a blueprint of the future.”

---

## Eternal Holiday House; holiday home of the future

In April Gerwin Jansen and Poppy Matobela, researchers at Delft Technical University, were staying on the isle of Ameland for a week exploring the possibilities for building a so-called ‘eternal holiday house’ on Ameland. That is to say: a house made of local materials, constructed in such a way that it does not cost energy but yields it. In addition eventually it should be possible to pull it down and transport it without any trouble. On Ameland Jansen and Matobela talked to, among others, the municipal corporation, business people and former Tourist Information Office manager Mr Pieter Smit.

Annually Ameland attracts about 600,000 visitors. They stay at hotels, camping sites or in one of the 1500 holiday cottages the island has. The business community stressed that the modern tourist is increasingly looking for greater

comfort. They are not at all opposed to sustainability as long as they do not have to give up anything in the comfort department. According to Mr Smit holiday cottages are an excellent means of making people conscious of the necessity of doing things in a more sustainable way provided they respond to the modern tourist’s wishes. As Mr Smit put it: “During their holidays people are more open to new points of view and that is a good moment to confront them with sustainability. New technologies must be made concrete. Make the visitor proud of the fact that he is staying in such a special holiday cottage. That supplies him also with a good story to take home.”

Jansen and Matobela’s conclusion was that it is certainly possible to construct a house from local materials but that on a Wadden Sea island as far as materials are concerned

there are limits. They do have, however, some ideas as to how this problem might be addressed. Gerwin Jansen: "The biosphere is limited both in species and in size. Sea shells may well be used as insulation material. However, now the agricultural sector is shrinking the vacant agricultural land might be used for planting crops that are suitable for building material. An additional advantage is that in this way biodiversity on the island will be enhanced." Several companies that operate along the C2C principle have already pledged their support for the construction of the future 'eternal holiday house'.



---

## Special toilet for island beaches

Within the foreseeable future, that is to say if the necessary funding is found, tourists may come across a sanitary novelty: a mobile toilet unit that separates urine and faeces and reclaims useful substances from them. Urine contains substances such as phosphate and nitrogen but also remnants of medicines such as painkillers, antibiotics, antidepressants and hormones from contraceptives. Waste water treatment plants are unable to remove all these substances from the waste water. Reclaiming valuable substances on the spot is cheaper, costs less energy and is therefore more sustainable.

Because of its components nitrogen, phosphate and potassium urine is a good fertilizer, which may be used directly or indirectly in agriculture. Also nutrients may be reclaimed to be turned into artificial fertilizers such as for instance struvite, a fertilizer consisting of nitrogen, phosphate and magnesium, which slowly releases its nutrients to the soil. The mobile toilet unit may be employed for instance on beaches, at festivals and other events. The unit is also intended to have an educational aspect, i.e. to give information and to acquaint the general public with this special sanitation concept.

---

## Island of Runde invites EPEA

At the invitation of C2C Island partner Runde from Norway a representative from EPEA visited the Runde Environmental Centre at the end of April. After initial discussions at the project kick-off meeting in Leeuwarden in February, the partner from Runde wanted to learn more about how they might apply C2C ideas in their environment so they invited EPEA for an on-site visit. The goal of the visit was to introduce C2C to the project partner using the newly constructed Runde Environmental Centre as a practical example to explore possibilities for using C2C materials in their project.

During the two-day visit the Centre, which is expected to be completed early this summer, was examined several times by various groups, including the local team members, a representative from the regional architects association and a group working on another EU funded project. Mr Nils-Roar Hareide, the initiator of the project

and head of the Centre, explained the main features of the buildings, mainly focusing on energy and water efficiency, a design principle not known to the group at the beginning of this process. The representative from EPEA used the opportunity to discuss C2C elements which could still be implemented, even at this late stage. These include carpets designed for indoor use that do not give off noxious gases and other C2C elements for the apartments and the restaurant. Also there were discussions about green roofs, moss walls which retain water and filter fine particulates from the air, other rainwater collection systems and alternatives to asphalt as paving material for parking lots and walk ways. All in all many C2C aspects were found to be quite promising for future collaboration.

*For more information please visit EPEA's website at [www.epea.com](http://www.epea.com), or contact EPEA directly.*



## C2C Islands meets Global Islands Network

At the end of April the C2CI project had a meeting with Graeme Robertson of Global Islands Network (GIN). GIN wants to promote a healthy future for islands world-wide –both ecologically, economically, socially and culturally speaking – by means of knowledge transfer, data collection and exchange of ‘best practices’. Graeme Robertson and Anna van Dijk agreed that GIN and the C2CI project will try to give each other mutual support and enhancement wherever possible.

The meeting took place on the island of Texel, also a partner in the C2CI project. During the visit it became clear that the concept of sustainability actually lives among Texel’s population. Increasingly more houses are covered with solar panels, there is no end of experiments with new small windmills, the swimming pool is heated with water that has been heated by sunlight and the town hall, which is under construction, will be heated with biomass from the island’s garden waste. Texel has also plans for a pilot project with tidal energy. As part of the C2CI project LED lighting will be installed in the ferry harbour.

### News in brief

#### Cradle to Cradle Chair in Rotterdam

Michael Braungart has been appointed extraordinary professor at Erasmus University in Rotterdam. His teaching commitment in full is: *Cradle to cradle in relation to sustainable system innovations and transitions in theory and practice*. A celebratory symposium called *Cradle to cradle as an innovation platform for the next industrial revolution* took place on 7 April. It was attended by more than 500 students, scientists and people from the business world.

#### Visit to Runde, Norway

As a follow-up to the start meeting at Leeuwarden the second partner meeting will take place on 7 and 8 October. The Environmental Centre on the Norwegian island of Runde will host all the project partners to exchange results and discuss activities for the time to come.

#### C2CI Website launched

The C2C Islands project website came online recently. For more details on background information, activities, partners etc. you can visit [www.c2cislands.org](http://www.c2cislands.org).

The Cradle to Cradle Islands project: a partnership of 10 islands and 12 other organisations (government bodies, educational, environmental and water organisations) cooperating for a healthy and clean future for islands in the North Sea region.

The partnership: Province of Fryslân (Lead Partner), Ameland and Texel (NL), Spiekeroog, Insel- und Halligkonferenz (D), Samsø and Anholt (DK), Ven and Tjorn (SE), Runde and Vagan (N), Shetland Islands (UK); Delft Technical University, Water Technology Institute Wetsus Leeuwarden, Wetterskip Fryslân, University of Applied Sciences Zeeland, EPEA/ M.Braungart, OOWV Oldenburg, Lund University, Aalborg University, IRR! Edinburgh, Pure Energy Centre/Shetlands. You would like to know more or want to contribute to the project? Visit our website or contact us.

Website: [www.c2cislands.org](http://www.c2cislands.org)

Contact: [info@c2cislands.org](mailto:info@c2cislands.org)

THE C2C ISLANDS NEWSLETTER IS CIRCULATED BY E-MAIL AS MUCH AS POSSIBLE. A LIMITED CIRCULATION IS PRINTED ON ENVIRONMENT-FRIENDLY PAPER.

European Union



The European Regional Development Fund



EPEA

The Interreg IVB  
North Sea Region  
Programme



provinsje fryslân  
provincie fryslân



Investing in the future by working together for a sustainable and competitive region