

CCC Experiences & Sea Level Rise & Coastal Community

On the road
to the Young Professional Coastal Community – YPCC

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&

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- Coordinator CZM-Centre- Rijkswaterstaat/Min.V&W (rtd)
- Tech. Secr. “Coastal Zones” IPCC: 1989-1994;
- Peer-Reviewer UNEP and IPCC: 2001 & 2007;
- Advisor EUCC & Resourcefully;
- Board Member of Int. Foundation: SLR, Seychelles;
- CCC Production: Initiator, Editor en Co-author.



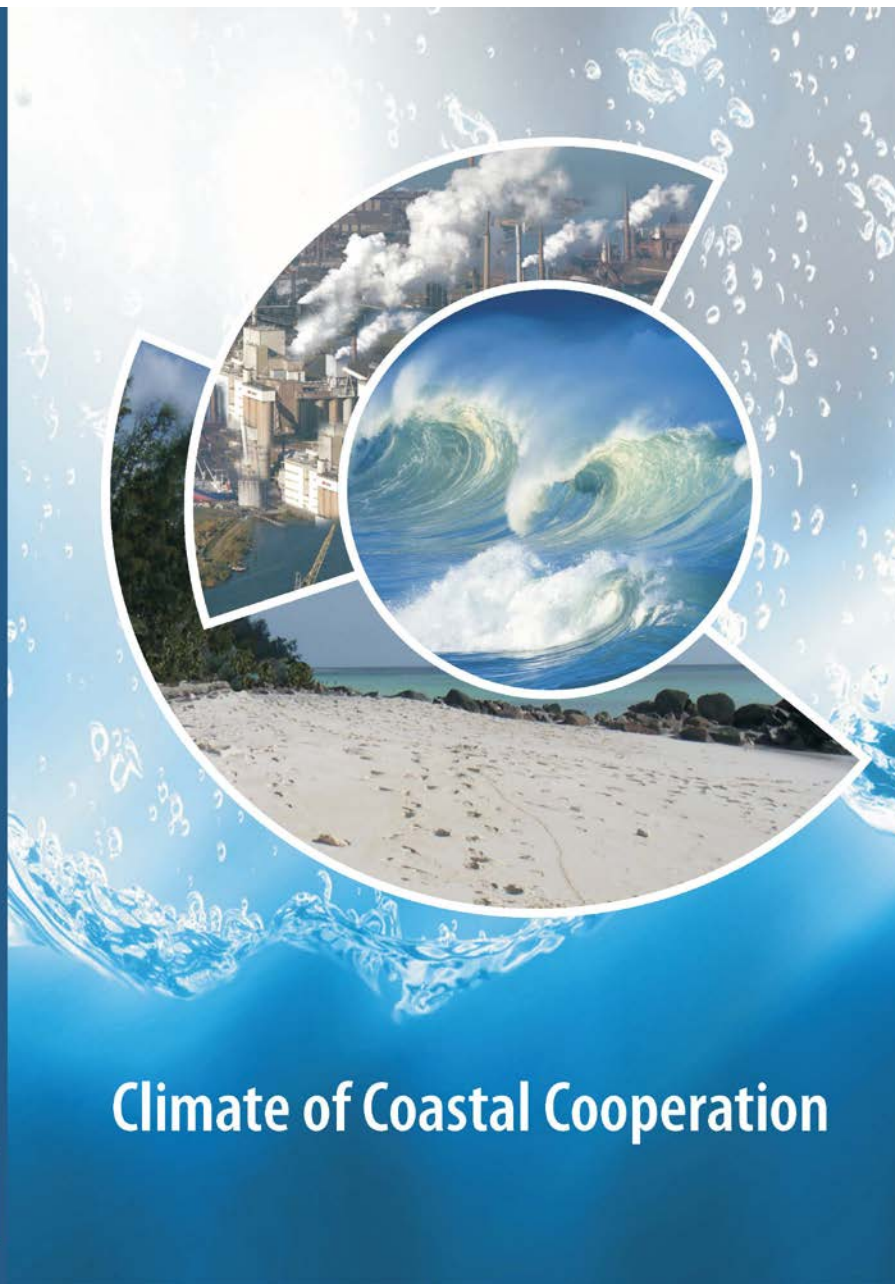
CCC

Littoral 2012

Contents :

1. The CCC production
2. The lessons learned
3. The cooperating Universities
4. The YPCC 2013





1. CCC Production:

**Book +
Internet Publication =**

**20 years of experience in coastal
management and development =**

Intro's by high level executives;

+

35 Cases from Europe and Asia;

7 Interactive GIS based

Training Tools & Manuals;

8 Examples of innovative,
adaptive coastal measures;

+

101 Inter - national co-authors with their
e-mail

addresses clickable listed.

Welcome to "Climate of Coastal Cooperation" CCC Production



"Sharing experiences in integrated coastal zone management will contribute to sound development of coastal resources and to find resilient, adaptive responses to climate change"
by Robbert Misdorp, CCC Editor and Co-author

Extended CCC Internet Publication



The extended CCC Internet Publication - 600 pages, includes:

The CCC Book plus:

- The Full chapters of the coastal cases in Europe and Asia;
- Free-of-charge downloadable: training manuals, demos of GIS spatial planning tools and PDF documents;
- The interactive list of the CCC authors.

Complete CCC Book - 7 MB version



The CCC Book - 208 pages, 2300 copies printed, includes:

- Introductions and Executive Summary;
- Summary chapters of many coastal cases in Europe and Asia;
- ICZM concepts and examples of adaptive coastal measures;
- Synthesis and perspectives for future coastal cooperation;
- Training manuals, guidelines, demos of GIS tools and selected PDF documents;
- The coordinates of the 101 CCC authors: a coastal community.

2. The CCC messages / lessons learned

through executed programmes

Coastal cases, tools and examples of adaptive measures::

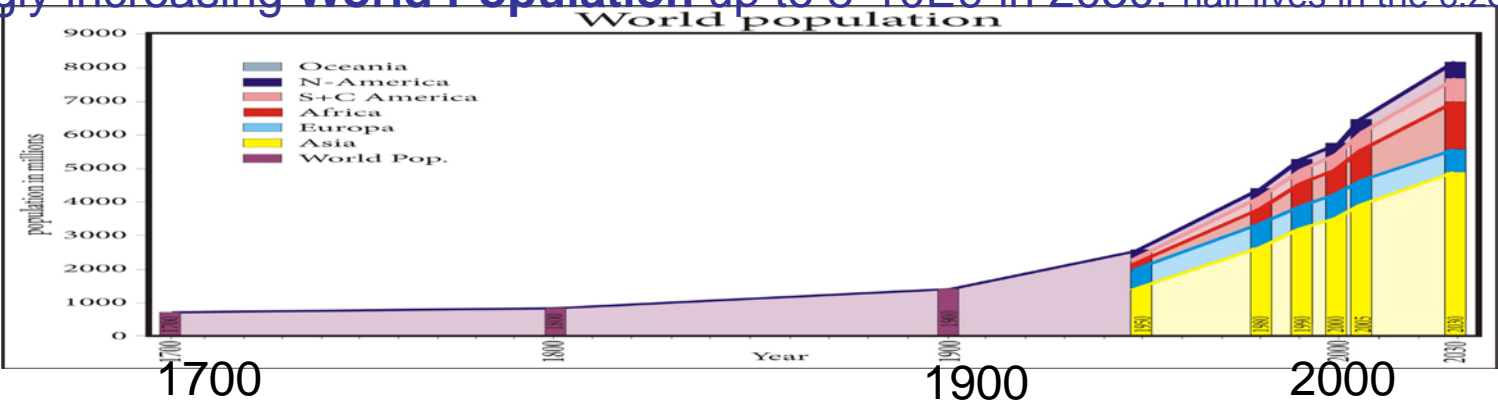
- 1) The triggered integrated, holistic approach pays off
- 2) ICZM → sustainable development of coastal resources
- 3) Sustainability delivers ECONomical and ECOlogical benefits
- 4) GIS spatial simulation tools:
analysing complex coastal problems & ICZM planning
- 5) Adaptive, resilient, no-regret measures :: win-win BwN solutions

Triggers for ICZM :

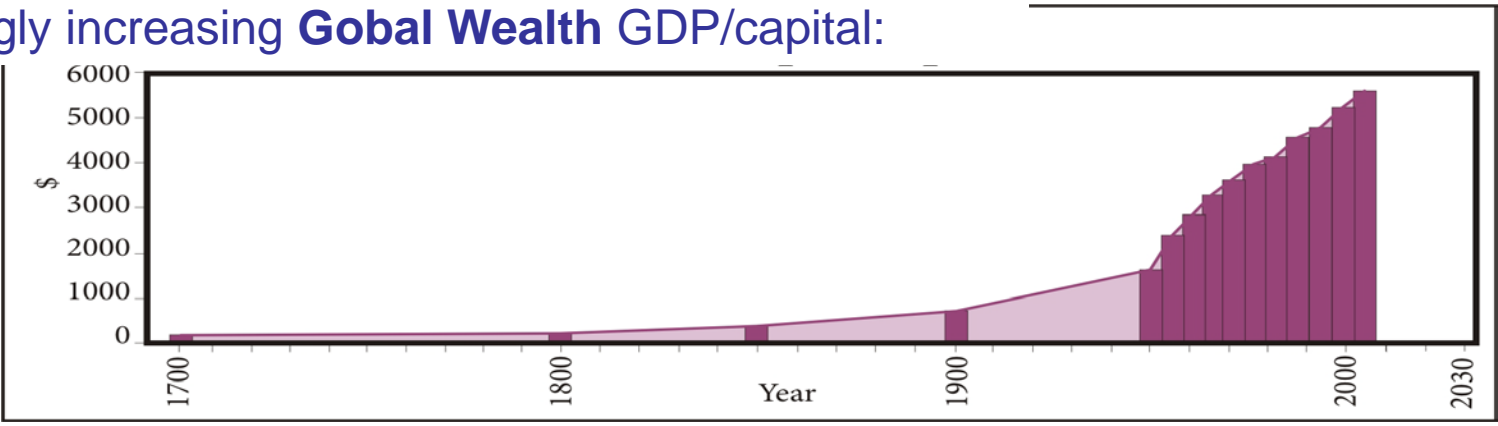
- Exponentially growing world population;
- Exponentially growing wealth: GDP/capita;
- Strongly increasing Green House Gasses and impacts of Climate Change.

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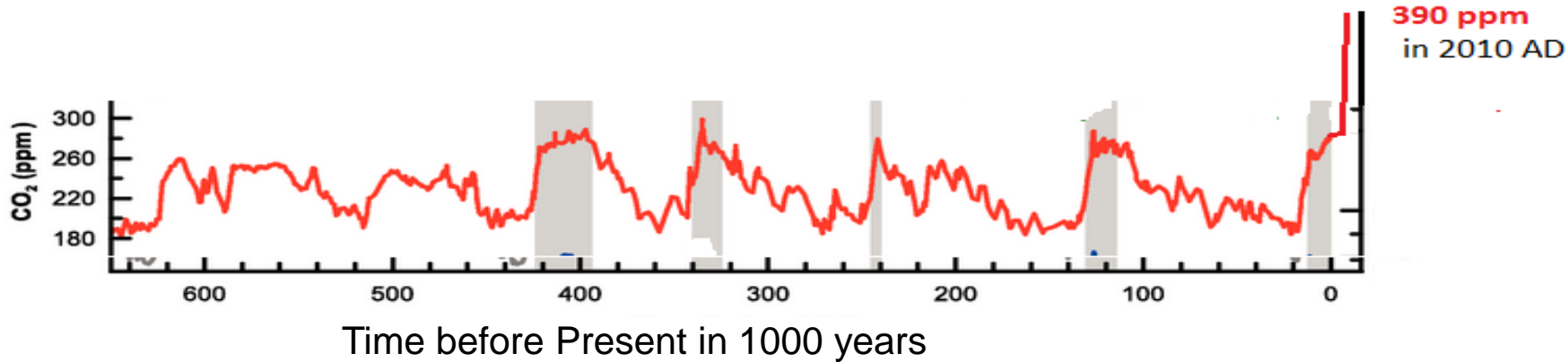
Strongly increasing **World Population** up to $8 \cdot 10^9$ in 2030: half lives in the c.zone:



Strongly increasing **Gobal Wealth GDP/capital**:

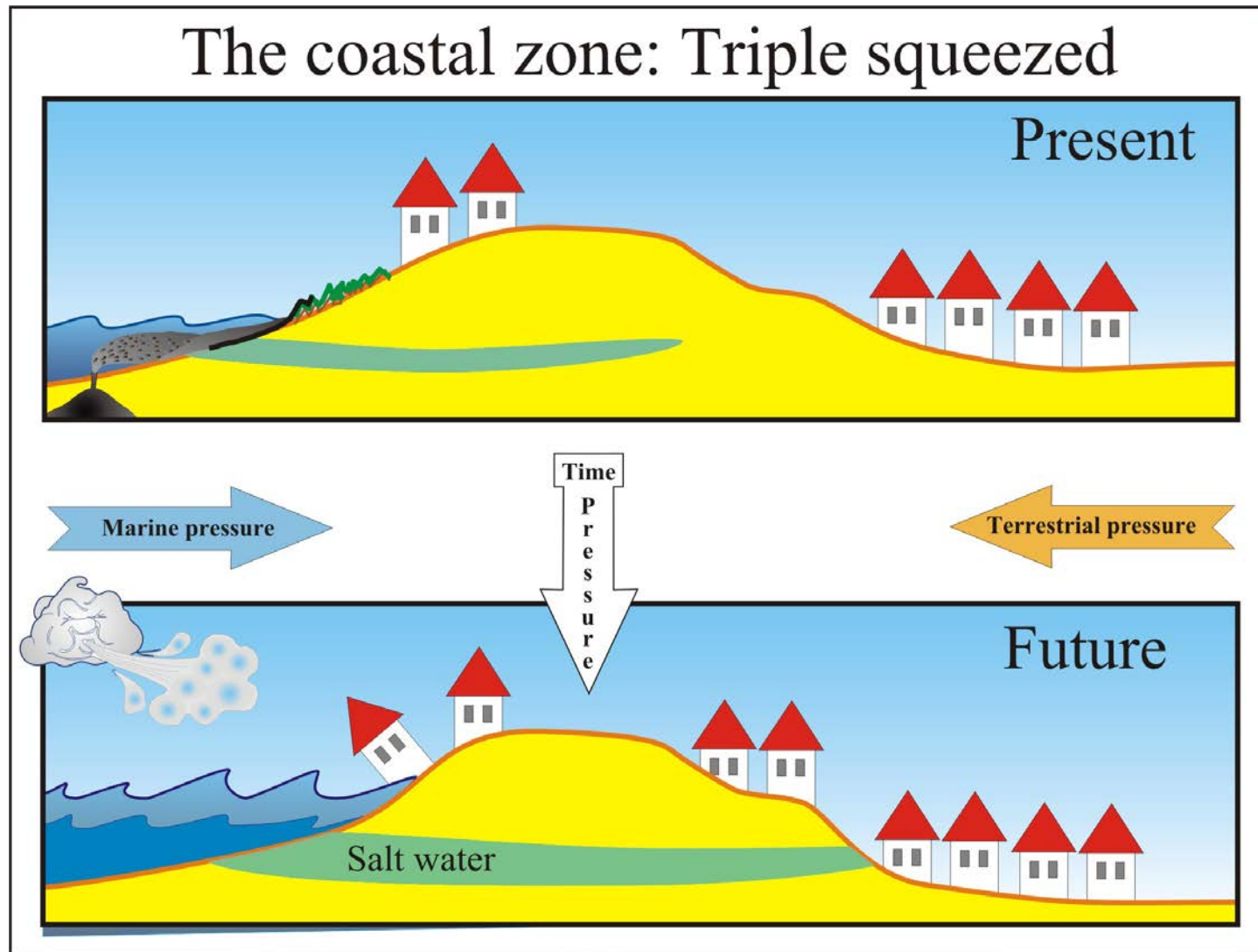


Strongly increasing **Green House Gasses**: from 290 to 390 CO₂,ppm in the last 100 years:



Natural CO₂ variation range: 180 – 280 ppm during 650,000 years

The coastal zone a valuable and a vulnerable, triple squeezed area



Ref: CCC Chapter II-1: <http://www.coastalcooperation.net/part-III/III-1.pdf>



CCC examples of adaptive win-win solutions:

- Rotterdam: Sustainable harbour development
- Vietnam: 22,000 ha mangrove replanting
- Seychelles: Coastal vegetation belt conservation
- Bangladesh: Shelter & schools and
Floating vegetable bed cultivation
- Netherlands: 5 ha floating greenhouse & floating houses

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Rotterdam sustainable harbour development -

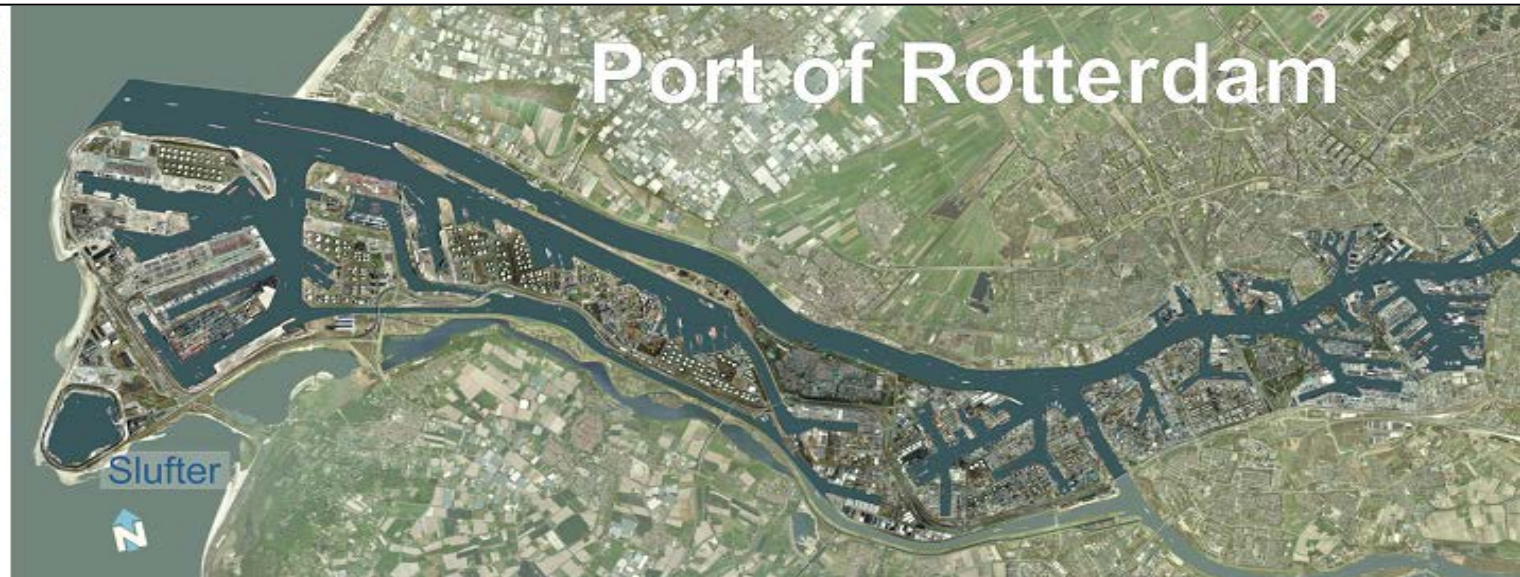
ROM Rijnmond programme 1993 – 2010 + Rotterdam Harbor Development programme 2010 – 2020



July 1, 2009



July 4, 2010



Slufter



Creating Win-Win situations: 1993 – 2010 programme:

and strong economic growth with an extra added value of 25 billion € (1996-2010)

and strong improved air & water & sediment quality,

and 750 ha greenery & 25,000 ha marine reserve,

and improved housing & recreational conditions and human health.

Through a structured, integrated approach:

Initial leadership by VROM, long term – 17 year programme - vision and commitment by all partners signed a covenant with 7 billion € budget and executed 28 projects.



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Ref: CCC Chapter I-2-2: 'Rotterdam Sustainable Harbour Development',

<http://www.coastalcooperation.net/part-I/I-2-2-f.pdf>

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Vietnam: Mangrove Planting by Red Cross

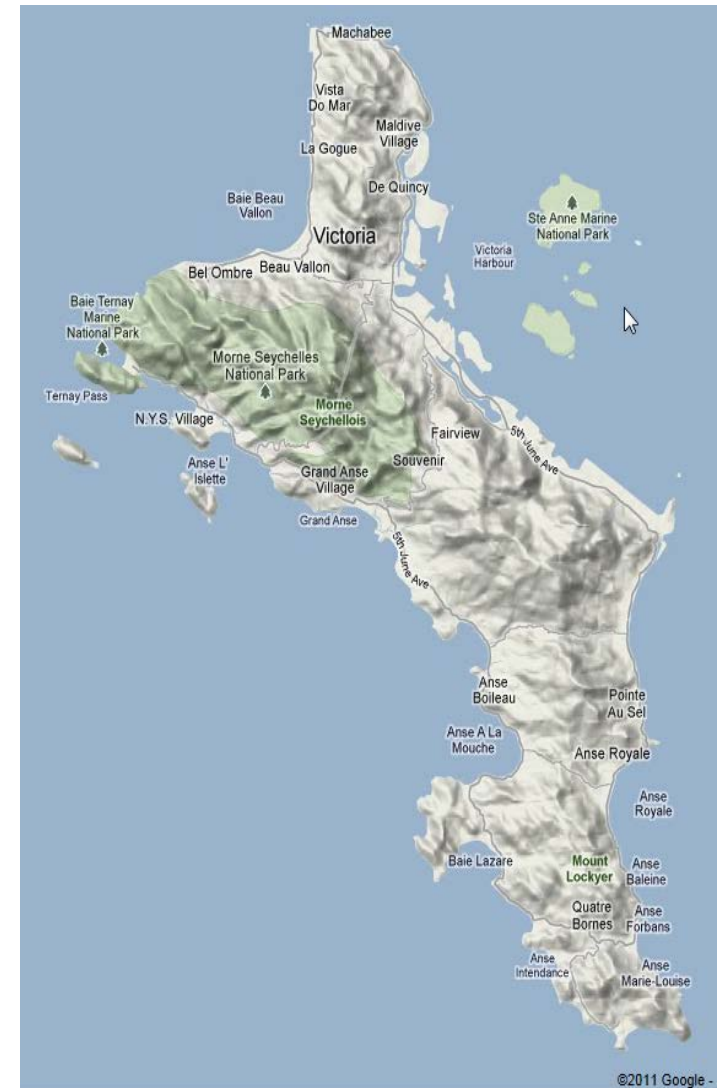
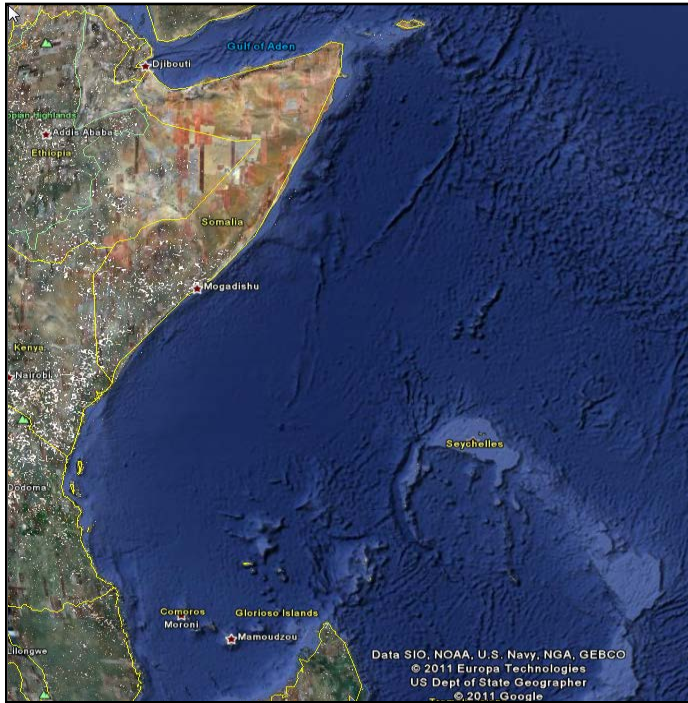


Since 1994: 22,000 ha mangrove planting for about 2 million \$:

- Increasing safety against cyclones and flooding **and**
- Reducing coastal defence costs with about 7 million \$/year **and**
- Increasing fish breeding habitat & fisheries **and**
- Enlarging the coastal bio-diversity **and**
- Providing employment & income.



Seychelles: nature conservation pays-off



Republic of the Seychelles:

- Island state in the Indian Ocean,
- 1.4 million km²,
- 80,000 inhabitants,
- 95% of population on the main granitic island Mahe.

Conservation of the uninterrupted coastal vegetation belt :

- Large bio-diversity and
- 60 % of GNP by tourism and
- Protection against flooding;



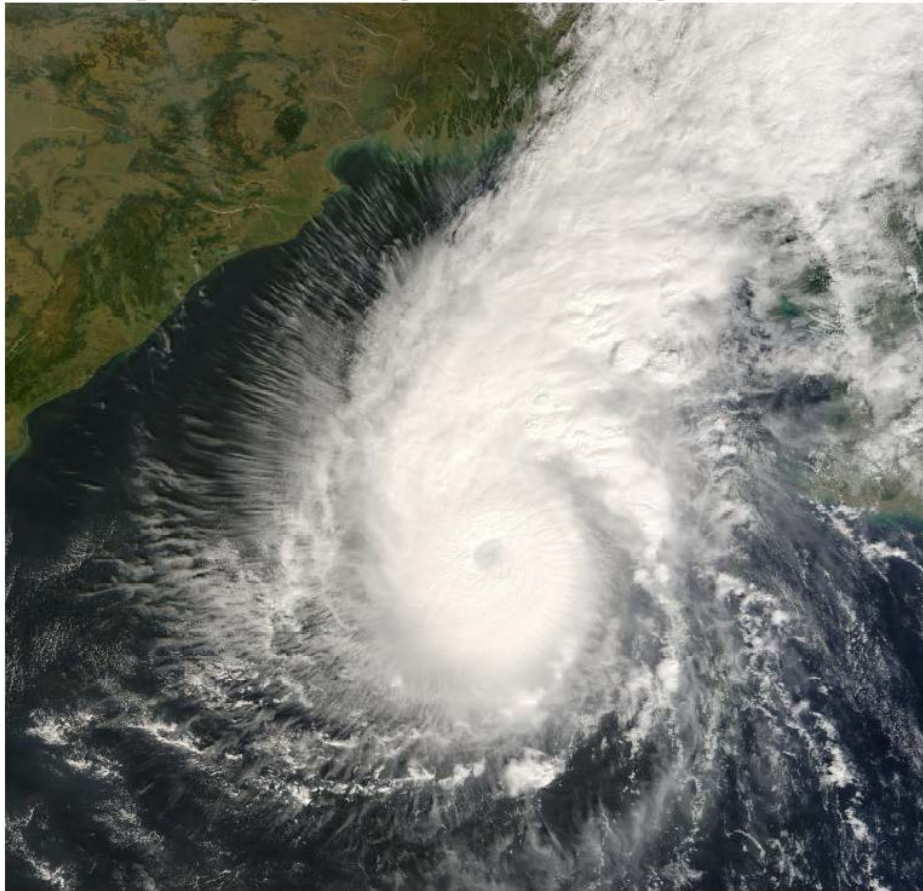
The 2004 Tsunami hit the coastal zone: the islands were protected by the closed coastal vegetation belt



Relatively little damage by the 4 m high breaking Tsunami waves,

- Two person killed,
- Infrastructure: two bridges between the capital and airport were “up-lifted” ,
- The uninterrupted coastal vegetation belt: only some Palm trees up-rooted,
- About 1.5 m back beach “cliff” erosion,
- Limited damage to the important coral reefs.

Bangladesh: Cyclone shelters = schools



Thousands of shelters built, withstanding effectively cyclones and saving many lives

Cyclone Sidr in the Bay of Bengal: 14/11/2007 killed about 3,500 persons,
a similar strong cyclone killed more than 350,000 persons in 1992



RAP – the main three Coastal Adaptive Strategies:

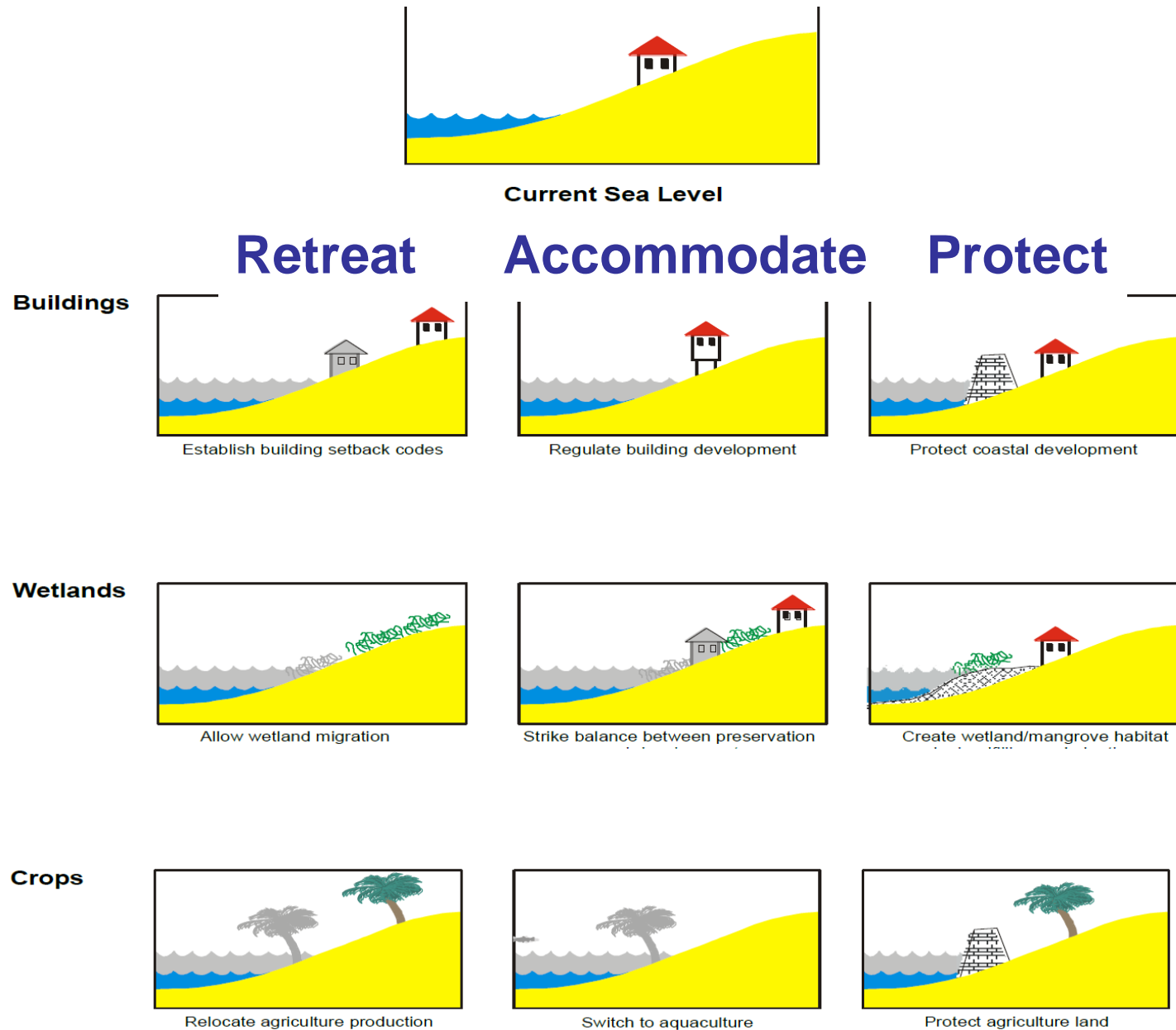


Figure 1: *Summary of three main strategies* addressing coastal erosion (in this example forced by sea level rise; IPCC, 1992).

Conclusion

CCC adaptive, no-regret, resilient measures

The adaptive, win-win, sustainable, long term solutions are not costing money but delivers money, if smart executed

Sustainability is good for the economy **and** ecology

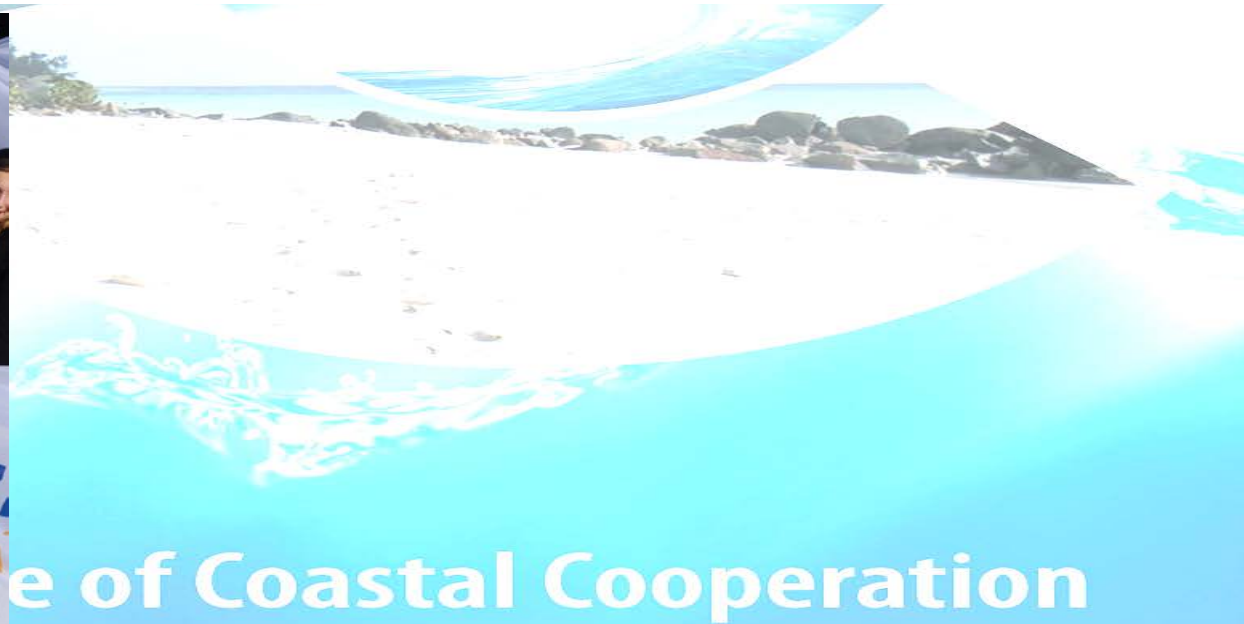
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3. The cooperation with three Colleges

Students and their lecturers of three Universities:

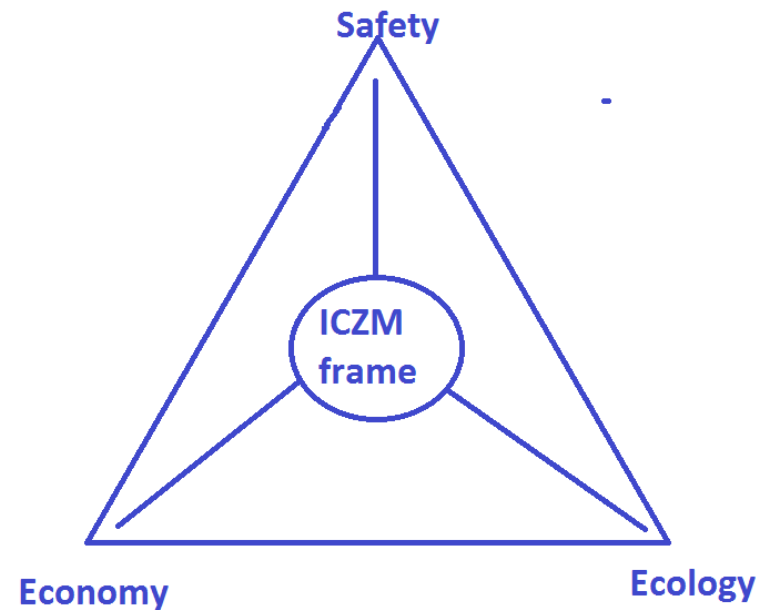
- Analysing long term changes,
- Identifying solutions,
- Visiting their coastal zone management fieldwork area,
- Organising a competition selecting the best group of students,

and taking into account the main messages of the CCC production.



The assignment for the students was to:

- Choose their 'own' stretch of coast,
- Analyse the future challenges <-> global changes,
- Identify adaptive, resilient, no-regret measures,
- Work as much as possible within an integrated triangle:
short & long term, Water Safety: flooding and supply,
create win-win Eco-Eco solutions, CAB, participation of stakeholders,
- Present and report their findings.



Three scenarios of Sea Level Rise were suggested:
0.4 m, 0.8m and 1.3 m /21th century



The three participating Colleges spent different periods of time for their preparation:

The Belgium Kath. Hogeschool Brugge – Oostende:
about three months on Vlaamse Baaie

The Leeuwarden Van Hall Larenstein Institute :
about three weeks on Groninger and Wadden Sea coast

The Vlissingen Delta Academy & Scaldis Tourist Institute:
about one week on Waterdunen-Plan, W Zeeuws Vlaanderen

4. The Young Professional Coastal Community

Aim: to strengthen the exchange of knowledge on impacts and adaptation between teachers, students and stakeholders

How: to deepen this successful first Littoral 2012 try-out,
to publish the valuable student reports in a booklet in Jan. 2013,
to involve in 2013 : 3 – 4 more Colleges in
Belgium and the Netherlands
to involve in 2014: 6- 8 Colleges in the EU,
to involve in 2015: 6 Colleges in Asia,
to make a long term plan: YPCC 2013 – 2016 and

We = EUCC, the external guest lecturers and teachers, start now based on the Littoral 2012 successful cooperation with making the YPCC 2013 Plan for Belgium and the Netherlands and finding the needed financial support.

Proposed elements of the YPCC 2013 Plan:

- Organise ICZM oriented fieldwork for College students;
- Provide guest lectures and demos of GIS spatial simulation tools;
- Provide more in-depth guest lectures on ICZM principles, coastal hydraulics, ecology and examples of successful cases and adaptive measures;
- Create and maintain an interactive YPCC website;
- Organise an international coastal conference with student presentations;
- Students report and distribute the conference results to the stakeholders.

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General Conclusions:

- Many serious challenges ahead;
- Do not panic, there is time to think, to analyse, to prepare measures;
- Use the time wisely;
- The students and teachers have shown a large amount of enthusiasm, that is a good sign;
- Strengthened exchange between the old and young generations can empower you to make wise, sustainable decisions;
- EUCC is looking forward to receive your reports, so that we can make a nice CCC Workshop reporting – January 2013 = a stepping stone
- This is only a start.

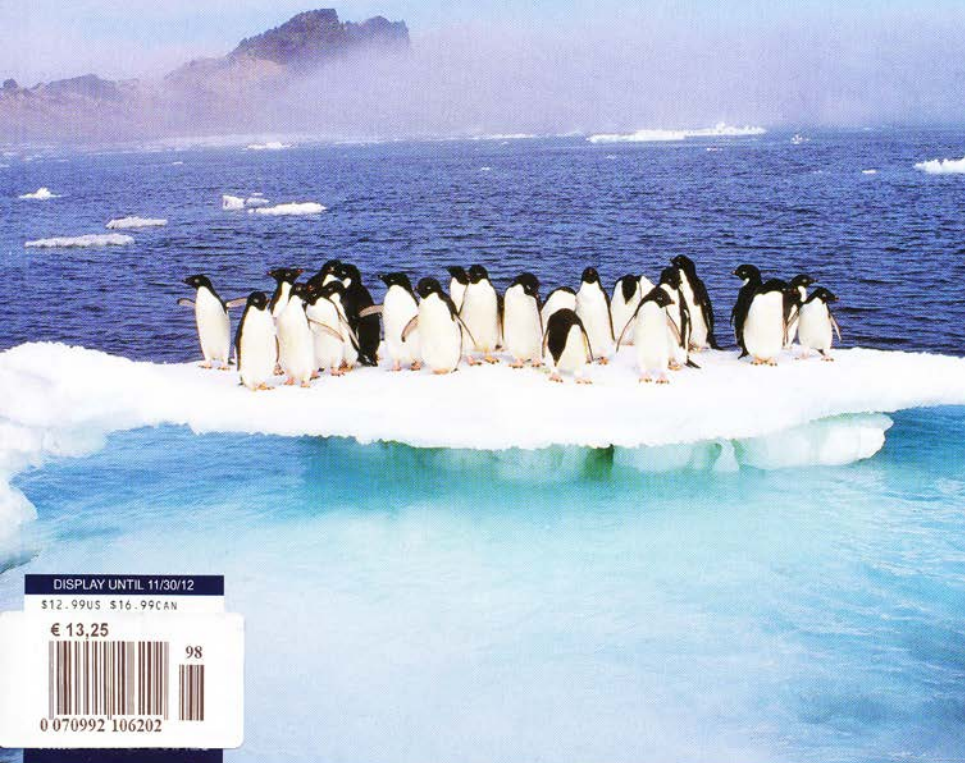
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TIME

GLOBAL WARMING

The Causes • The Perils • The Solutions

BY BRYAN WALSH
with TIME correspondents



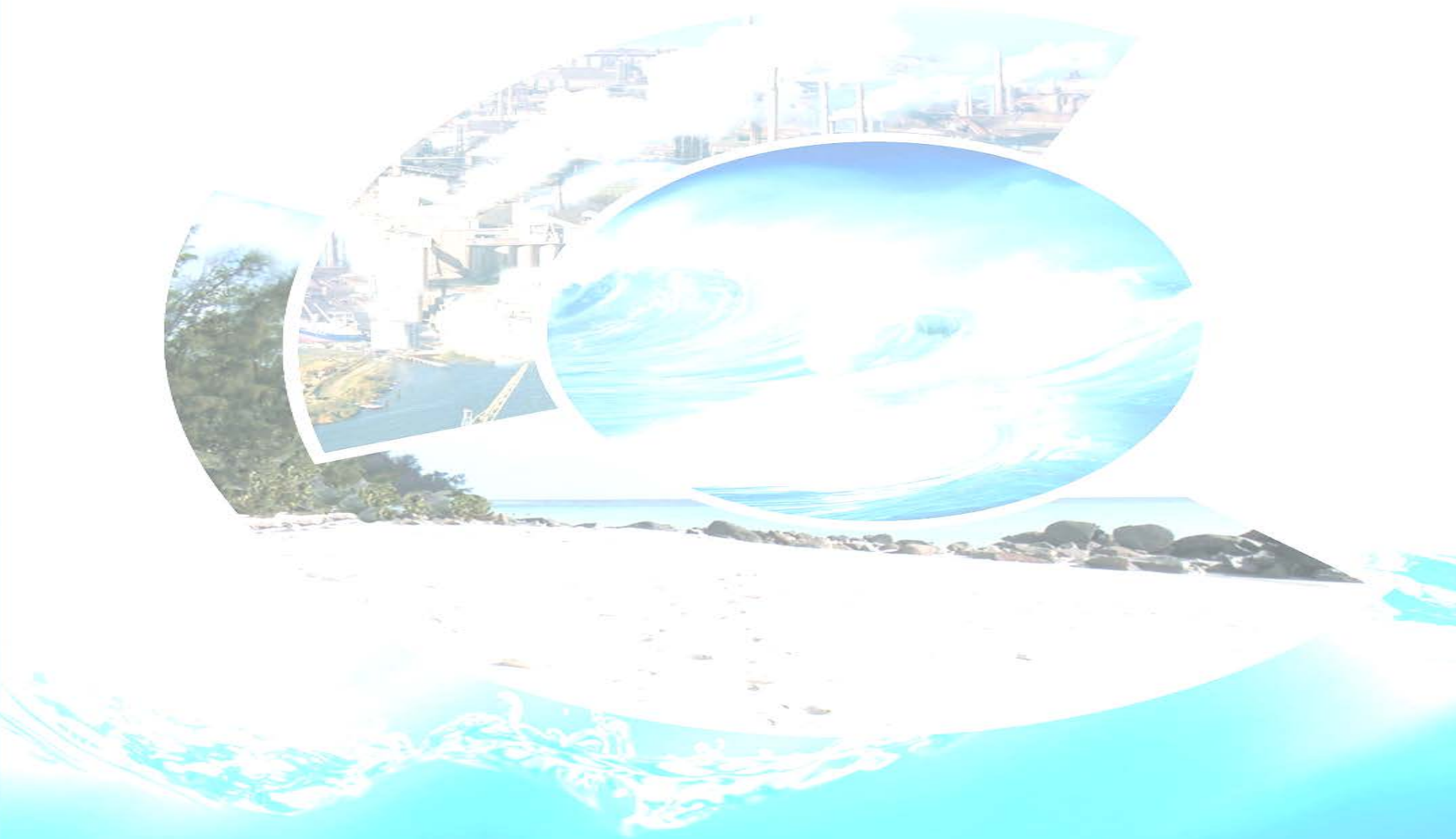
An important signal of hope

The USA starts informing the public realistically... the period of denial is over:

Analysing the causes →

Identifying solutions

Time issued November 2012



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