

# VELADOR

Science-Based Sea Turtle Conservation Since 1959

Issue 1, 2013

## Developing Ecotourism Supports Local Community and Sea Turtle Conservation

Bluff Beach is a beautiful white sand beach on one of the many islands that make up the Bocas del Toro archipelago, on the Caribbean coast of Panama. Tourists love to admire the view, surfers enjoy the breaks, and now the beach is being recognized as an important nesting site for critically-endangered leatherback and hawksbill turtles.

Sea Turtle Conservancy (STC) became involved in Bluff Beach in 2010, when the filming of a Survivor-style TV program created an international scandal due to the apparent disregard by the production company for the damage they were causing to the fragile habitat and the subsequent impact on sea turtles and their nests. STC Research Coordinator Cristina Ordoñez was asked by local government officials to provide technical advice to reduce the negative impacts of the filming activities on sea turtles and beach habitat.

Hawksbill Turtle at Bluff Beach | ©Rich Wagner | WildNaturePhotos



Residents of the small indigenous community at Bluff Beach also took note of what was happening. Their concern for the sea turtles nesting at Bluff Beach became the catalyst for the creation of a local community conservation organization, the Bocas Hawksbill Association (Asociación Natural Bocas Carey – ANABOCA).

Irresponsible filming is just one of numerous threats facing sea turtles at Bluff Beach. Intensive sand extraction has also contributed to an unstable beach environment, compounded in recent years by coastal development resulting in the loss of vegetation behind the beach, and an increase in artificial lights. Add to this the continuing illegal poaching of eggs and nesting females, and the situation needs immediate attention.

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**Inside: Turtle Habitat on Florida Beaches Threatened By Sea Level Rise**



**Update: “Adopted” Tagged Sea Turtles Return to Tortuguero**

## STC's Work Featured at International Symposium on Sea Turtle Biology and Conservation

STC staff members were among 1,000 sea turtle researchers, conservationists and educators from 75 countries who met in Baltimore, Maryland, from February 2-8 for the 33rd Annual Symposium on Sea Turtle Biology and Conservation. The theme of the meeting, "Connections," emphasized the varied and numerous links between people, turtles and the environment.

STC played a prominent role in this year's meeting. In the opening session of the symposium, David Godfrey, STC Executive Director, participated in a unique panel discussion attended by the full membership of the International Sea Turtle Society, along with a specially-invited group of over 100 Baltimore teachers and students. The students took turns grilling the panel with complex questions about sea turtle biology and conservation. The kids were very enthusiastic and did a great job trying to stump the panel with tough questions like, "How long do sea turtles live?" and "Why are sea turtles worth saving?" Immediately after the opening discussion, panel members joined the teachers and students for a brown bag lunch, during which the panel members spoke more candidly with kids about potential careers in biology and conservation.



From left to right: Dan Evans (Research and Technology Specialist), Dr. Emma Harrison (Scientific Director), Marydele Donnelly (Director of International Policy), David Godfrey (Executive Director), Merna Wimsatt (Membership Coordinator), Laura Forte (Board President)

The symposium continued with Marydele Donnelly, STC's Director of International Policy, serving as one of six panelists in a session on sea turtle success stories. Marydele highlighted the great work accomplished through the Marine Turtle Conservation Act, which distributes much-needed funding through the Fish and Wildlife Service for critical sea turtle research and conservation projects outside the U.S.

Dr. Emma Harrison, STC Scientific Director, presented a paper describing STC's role in developing a collaborative eco-tourism program at Bluff Beach,

Panama, which is bringing together local community members, nonprofits and government agencies in an effort to create sustainable economic opportunities for the community that also promote sea turtle conservation.

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## VELADOR {bel.a.dor}

In Caribbean cultures, **Velador** translates as "one who stands vigil" — originally referring to turtle and egg harvesters who waited at night for turtles to come ashore. Now STC claims this title for its newsletter, and around the Caribbean STC's researchers and volunteers are replacing poachers as the new veladors.

The **Velador** is published for members and supporters of the nonprofit **Sea Turtle Conservancy**. STC is dedicated to the conservation of sea turtles through research, advocacy, education and protection of the habitats upon which they depend.

*Executive Director*  
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*Scientific Director*  
**Dr. Emma Harrison**

*Controller*  
**Pat McCloskey**

*Director of International Policy*  
**Marydele Donnelly**

*Technology & Research Specialist*  
**Daniel Evans**

*Coastal Policy Coordinator*  
**Gary Appelson**

*Sea Turtle Lighting Specialist*  
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# Conservation In Action

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STC began its work at Bluff Beach by providing training to the local community in sea turtle monitoring and conservation techniques. Members of ANABOCA now work as beach monitors under the employment of STC, collecting information on turtle species nesting at this site and assessing threats to their survival.

Since 2011, STC has been leading a project to develop sustainable sea turtle eco-tourism with financial support from the USAID Regional Program for the Management of Aquatic Resources and Economic Alternatives. The project's objectives are to provide economic benefits to the local community, sustainable funding for turtle conservation initiatives, and a unique opportunity for visitors to Bocas del Toro to witness sea turtles nesting in a controlled setting.

An important part of this project was a Sea Turtle Nature Interpreter training workshop conducted in 2012. Residents from Bluff Beach and other

coastal indigenous communities participated in the 3-day course, during which everyone increased their knowledge about sea turtles. They also had an opportunity to practice the interpretative skills needed to successfully lead safe and informative sea turtle walks for groups of visitors in the future.



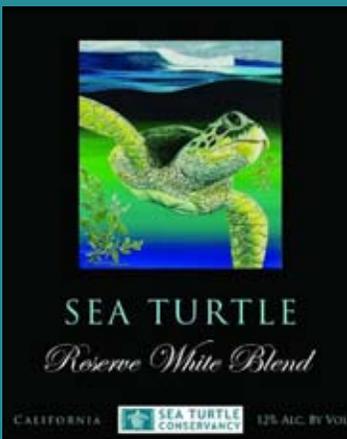
Bluff Beach Turtle Walk Guides 2013

Additionally, the project created the Bluff Beach Advisory Group, which includes representatives from STC, ANABOCA, local nonprofits, municipal government, and the Smithsonian Tropical Research Institute. The Advisory Group helped design an information brochure that is being used to promote sea turtle walks at Bluff Beach.

Beach monitors have completed their training for the 2013 leatherback nesting season at Bluff Beach. STC is promoting the official turtle walks at hotels, local businesses and to visitors. Through this collaborative project, travelers to Bocas del Toro now have a chance to witness this amazing natural phenomenon while supporting community development and turtle conservation efforts. 🐢

**By Dr. Emma Harrison**  
*Scientific Director*

## “Sea Turtle Wines” to Aid the Protection and Recovery of Endangered Sea Turtles



Weibel Family Vineyards and Sea Turtle Conservancy have joined forces to protect sea turtles with the release of “Sea Turtle Reserve Red” and “Sea Turtle Reserve White” wines.

Although California wines and sea turtles may seem to have little in common, Fred Weibel, winemaker and owner of Weibel Family Vineyards, is a long-time sea turtle enthusiast and wants to give something back to help protect these magnificent marine animals.

A portion of the revenue generated from these specialty sea turtle wines will help save sea turtles in Florida and elsewhere. To purchase, please visit [www.weibel.com](http://www.weibel.com) or ask your local restaurants and wine stores.

## Tour de Turtles Research Increasing Knowledge and Awareness About Sea Turtles

Sea Turtle Conservancy's Tour de Turtles (TdT) is a popular online educational program built upon the pioneering tracking program begun in 1996. More than

16,000 teachers around the world have registered to use STC's online satellite tracking program as part of their curriculum, representing more than half a million students. Developed in 2008, TdT generates considerable public interest in sea turtles.

During 2012's three-month program, more than 30,000 individual visitors were inspired to log onto the website and follow the turtles being tracked.

Each year, TdT tracks sea turtles as they race to complete a turtle "marathon," migrating from their nesting beaches to unknown foraging grounds. The winner of the Tour de Turtles is the turtle that swims the furthest distance during the three months of the race.

The turtles being tracked depart from some of the most important nesting sites in the Western Hemisphere. An animated character is created for each sea turtle being tracked and their migration is plotted on a map posted on the TdT website. Using the Google Maps format, the turtle maps are updated daily with new locations. This makes the maps dynamic, allowing viewers to zoom in or

out, move the map around, and select from several different backgrounds.

When possible, STC conducts public events to allow people to see turtles up close as they start their migrations. These public events generate a lot of awareness and interest. The online TdT program provides a way to keep people interested in sea turtles after the excitement of the release, while providing important information about sea turtles.



Loggerhead competitor Pearl start the marathon | By Celeste McWilliams

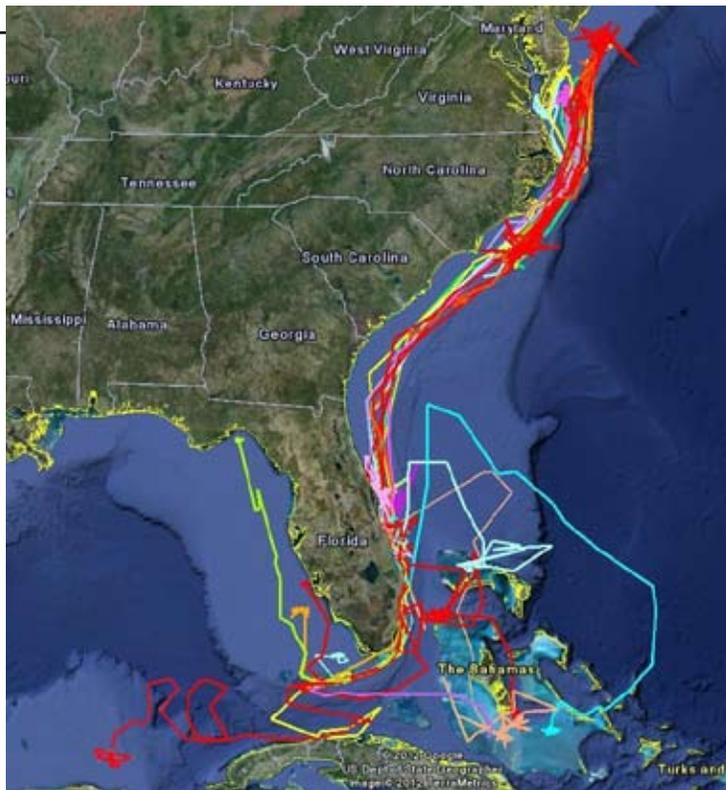
TdT also includes information about the threats to sea turtle survival. Some of the threats specifically relate to certain sea turtle species, while others are representative of threats to marine and coastal ecosystems used by sea turtles. For example, one recent turtle participant

helped raise awareness about the problem of marine debris, while another focused attention on the problem of artificial lights on nesting beaches.

Many teachers using the TdT program return year after year with new classes of students. They follow along as new discoveries are made and become inspired when an event like the Gulf oil spill impacts sea turtles. TdT also provides students and teachers with data and tools they can use to conduct their own related research.

The key to TdT is that it combines data from STC's various scientific migration-tracking research projects in a fun and interesting way, inviting the general public and classrooms to discover the incredible world of sea turtles by monitoring their movements in near real-time.

Research conducted through TdT has shown leatherbacks from Costa Rica and Panama using new migratory pathways when leaving the Caribbean Sea and new feeding areas in the Gulf of Mexico. Satellite tracking green turtles from our project in Tortuguero, Costa Rica, has documented migrations as far as the Yucatan Peninsula, further than any previous migrations tracked via satellite from Tortuguero.



Five years of TdT tracks from loggerhead turtles released in Florida

tracking had shown primarily southern migrations.

STC's tracking of hawksbills from the eastern Caribbean has shown that hawksbill turtles can migrate long distances to waters off of Central America, migratory movements that were previously unknown for hawksbill turtles.

These new discoveries are shared through TdT as they are happening, creating a connection between the audience and sea

And the tracking research on loggerheads from Florida has led to the discovery of a northern migration corridor for loggerheads that nest at the Archie Carr National Wildlife Refuge. Previous

turtles, while increasing awareness about human-related threats and fostering public stewardship for endangered sea turtles. 🐢

**By Dan Evans**  
*Research & Technology Specialist*

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STC lighting expert, Karen Shudes, presented the promising results of a project that is working with beachfront property owners in Florida to retrofit lights using the latest turtle-friendly technology.

STC staff members Dan Evans and Cristina Ordoñez gave excellent presentations on their respective project results. Dan presented on STC's annual satellite-tracking and education program, Tour de Turtles. Dan reviewed the findings from five years of satellite tracking data to show the diverse migratory patterns of sea turtles, many of which were uncovered for the first time through STC's telemetry research. Cristina's presentation focused on the success of hawksbill nesting in the Comarca Ngöbe-Buglé and Bocas del Toro, Panama. Since 2003, STC has documented significant increases in both leatherback and hawksbill nesting, making the region one of the

most important in the world for both species.

At the Farewell Banquet, Symposium President Ray Carthy presented Marydele Donnelly with this year's President's Award for her 28 years of accomplishments in sea turtle conservation. Donnelly was recognized for her important roles in the passage of the Marine Turtle Conservation Act and the establishment of the Archie Carr National Wildlife Refuge. Her leadership in thwarting the re-opening of international sea turtle trade and in enacting regulations requiring the use of Turtle Excluder Devices in all U.S. shrimp boats also were recognized.

STC looks forward to continuing its annual presence at the 34th annual symposium, which is scheduled to take place in New Orleans in early 2014. 🐢

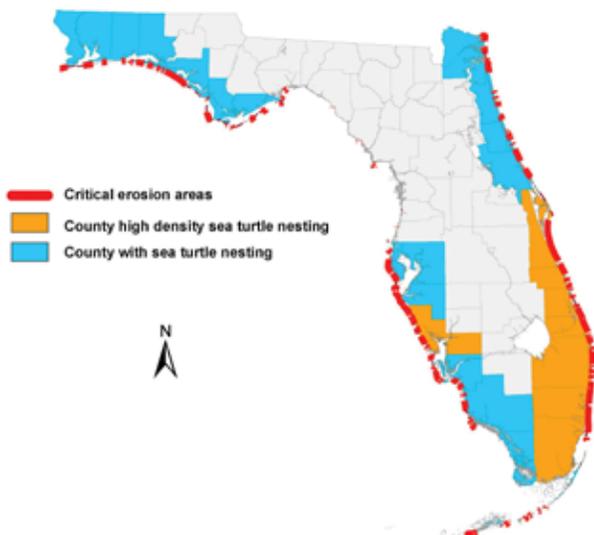
**By David Godfrey**  
*Executive Director*

## Turtle Habitat on Florida Beaches Threatened By Sea Level Rise

The southern Atlantic shores of the United States are highly vulnerable to sea level rise, which could be devastating for sea turtles. Sea level rise is one of the biggest long-term threats facing sea turtles. Parts of Florida's coast could see a 40 to 80 percent decline in the area of sandy beach with just a 15-inch rise in sea level, which is well within the range projected during this century.

Under natural conditions beaches migrate inland and barrier islands shift in response to storms and increases in mean sea level. Structures such as seawalls, buildings and roads can change these natural processes and prohibit the migration of beaches. The result is loss of beach resiliency, increased beach erosion and the narrowing of the sandy beach area. This is especially problematic in Florida, where most of the beachfront is lined with development. As erosion increases, people often try to protect their property by building seawalls. Seawalls can have devastating impacts on turtles and their nesting habitat. They prevent sea turtles from reaching suitable nesting habitat. They also increase the erosion in front of and around them, resulting in the need for more seawalls.

Of Florida's 825 miles of sandy beaches;  
~398 miles are designated as critically eroded;  
~222 miles have been nourished.



STC's Gary Appelson standing in front of an exposed sea wall in Brevard County after a hurricane

To combat coastal erosion, Florida has one of the most aggressive beach renourishment programs in the country and annually spends many tens of millions of dollars adding sand to beaches. Projected sea level rise, increases in coastal storms and the increasing costs of beach renourishment due to dwindling supplies of nearshore sand sources raise serious doubts about the long-term sustainability of this beach management strategy. Surprisingly, neither Florida's beach renourishment program nor its coastal development regulatory policies consider climate change or sea level rise.

Florida's beaches host over 90 percent of all the sea turtle nesting in the United States. Almost half of the beaches have already been designated by the state as critically eroded. This means that adjacent upland properties are already threatened and in need of perpetual protection from the surf. Furthermore, sea turtles also depend on other marine habitats such as grass beds in the bays and lagoons, reefs, and nearshore rock hard bottom areas for foraging and refuge. These habitats will also be impacted by rising seas and increasing global temperatures.

Florida's beaches are ground zero for the impacts of sea level rise, posing a huge threat not only to sea turtles but to Florida's coastal economy and residents. To protect our beaches, Florida should at least be reforming its coastal management policies to incorporate climate change and sea level rise and exploring ways to incentivize people to build or rebuild away from the most seaward, at-risk locations.

By Gary Appelson  
Florida Policy Coordinator

## Adopted Turtles Return to Tortuguero

From July to September each year, Sea Turtle Conservancy researchers tag and collect data on the green turtles that nest on the beaches of Tortuguero, Costa Rica. Since these turtles are not tracked via satellite, STC keeps adoptive “parents” informed when their turtles are spotted nesting in Tortuguero. The “parents” of the turtles are listed below:

Ilse Akkerman	Naomi Crofton	Todd Harrison	Fritz Miller
Mary Lou & Jack Alexo	Vanessa Cubillo	Sanne Heber	Monaco Mireille
Stephanie Allen	Mary Curns	Enrico & A. Heijmen	Leslie Mitchell
Louise Allen	Laura De Haan	Marieke Heinsbergen	David Moertel
Lida Alsemgeest	Nina De Jong	Laurie Henson	Jamie Morales
Alejandra Andavert-Seemann	Carola de Vries	F. Hijnen	Julia Munster
Rebecca Asai	Sandrine Raoul	Monty Hilton	Aidan Murray
Justin Ayotte	Jeremy Dennis	Sander Hoomen	Elliott Nelson
Ria Babay	Karin Derks	Frank & Cathy Hubbard	Daniel Newlon
Lie & Han Bakker	Shakie Desai	Pia Hummel-Penning	NHHS Class of 2011
Jako Bakker	Petra Dijkzenl	Linda Hunter	Gayle Norman
Disa Banker	Naomi Doevendans	Toshihiko Inoue	Michael Nowak
Adie Barto	Sarah Dube	Joel Inzerillo	Barry and Marge OBrien
Jennifer Bateman	M. Duinkenken	Ray Janisse	A. Oldenburger
Henry Batty	Marlyni Duis von Damm-	Rebecca Jepson	Shoshana Osofsky
Cherry Baugher	Korlelant	Kelly Patton Johnson	Travy P
Tom Baulsir	RJW Dupont	Jim Johnson	Nicholas Pagan-Walbert
Sarah Bechdel	Sabine Dupret	Wim Jonas	Arnold & Claartje Pannekoek
HC Beek	Amy Dykes	Lynda Jones	Sharon Parker
Maria Beehuis	Jacqueline Echols	J. Jongeruis	Sarla Parmar
Rosa Isela Bermeo	Eric Eng	Terri Kamp	Wayne Parrott
Jessica Berry	Jolene Ernst	Duncan Kenzie	Mary Perez Lopez
Fleur Blom	Eric Essen	Elaine Ridley Kharbanda	Graziella Pistone
Gerard Blomsma	Marlies Esser	Jeanie Kilgour	Jan Plantinga
Hugh Boarland	Carla Fakkeldij	Margo Kirchner	Bert Polling
Alexandra Boehi	Zach & Mike Farr	Bryan & Myrna Kirk	Paulette Preiss
Annette Boehm	Poppy Farrington	Diana Klonaris	Rita & Harry Ransom
Steven Boon	Benjamin Feldman	Karin Koks & Bjorn van	Suvarna Ratnam
Angelique Boons	Hannah Flammenspeck	Kleef	G.K. Rauwerda
Math Boshouwers	Tom Flanigan	A. Koolen	Han Rens
Edmonda Botteldoom	Jared Flinn	Anna Kootje	Guusje Rieter
Nicole Boyet	The Fox Group	Leah Kosior	Robin Riley
Laurens Braaksma	Maaretje Fransea	Art & Diane Krassenstein	Elias Rodriguez
Rachel Bradshaw	Mary Ellen Frazier	Richard Kumlien	A. Romme
Emma Brandt	Nicole Garcia	Madison Kurtz	Isaac Rose Berman
Roman Brechun	Donald Gebhart	Shana Labeled	Rachel Roth
Josefina & Anton Brinks	Beth Golden	Debbie & Jennifer Larder	Rita N. Rotton
Michael Bucher	Anita Golightly	Larry Litchfield	Sandra, Ivor, Miranda, Remco
Fred Burdick	Marilynn Gomez	Brandi Lord	Donna Sawyer
Madison Burkhead	Christina Gonzalez	Jacinta Louwes	Karin Schepers
Ellery Burton	Stefan & Sandra Gossens	Fred Magley	Saskia Schimmel
Virginia Campbell	Maria Graham	Jose Manuel Portas	Raymond Schlueter
Jennifer Carr	Susan Greeley	Schuyler McClain	Koshin Schomberg
Marta Carvajal Leyva	Cindy Guguentz	Charlene McClurg	Samantha Schulte
Carlos Raabe Cercone	Juergen Haas	John McHugh	Kim Schultink
Max & Miles Chodes	Mariska Haddingh	Bianca Meijer	B. ScottClara Serrablo
I.W. Coenders	Mike & Melissa Hale	Harmony Melville	Luke Shafnisky
Carol Connelly	Carolyn Hallahan	Bev Middlebrook & George	Chris Sillari
Sofie Coppens	Emma Hardwidge	Radelja	Miranda Smit
P. Cox	Darwin Harris	Jane Milburn	

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# Turtle Guardians

## Turtle Guardians Sustain Conservation Work with Monthly Donations

For as little as 33 cents a day, less than the price of a postage stamp, you can help sustain Sea Turtle Conservancy’s work in the United States, Costa Rica, Panama, Bermuda, and the Caribbean.

For a donation of only \$10 per month, you can become a Turtle Guardian, providing STC with steady income that supports vital research, education, advocacy, and habitat protection programs.

Automatic monthly donations are less expensive for STC to process, so signing up as a Turtle Guardian is the best way to ensure that the greatest percentage of your gift is devoted to saving sea turtles.

STC spends 87% of all donations directly on research, conservation and education programs. The remaining 13% covers necessary administrative and fundraising functions. This responsible use of donation dollars has been recognized by charity watchdogs GuideStar and Charity Navigator, which has awarded STC their highest rankings seven years in a row for our commitment to transparency, good governance and fiscal responsibility.

Visit [conserveturtles.org](http://conserveturtles.org) to sign up to become a monthly donor today. After your initial donation is processed, future donations will be charged to the same credit card on the day of the month of your choice. Monthly donations can be cancelled any time, by calling 352-373-6441 or emailing [membership@conserveturtles.org](mailto:membership@conserveturtles.org).



Green Turtle Hatchling in Melbourne Beach, Florida | Ursula Dubrick

Harper Smith	Joan Tourtelotte	PJ Van der Wilk	Susan Walker
Michael J. Smith	Barb & Dennis Travis	J. Van Geffen	Lyn Watner
Julie Smith	Diane & Charles Trenka	Marianne Van Griensven	Victoria Watson
Jeroen Speksnyder	Laura Trombley	Therese Van Houten	Terri Wegner
Simone Spousel	Sarah Tronci	Hilde Van Loker	Judie Weinstein
St. Vincent de Paul School	Sharon Trundley	Sylvia Van Ravesteijn	Marlaine White
Anita Stolk	Youri Tuk	J. Veerman	Lisette Wiefierink
William & Shanna Sullivan	Frank Van Beede	Anneloes Ven Erp	Natasha Wit
Laura Sutcliffe	Leo Van de Winkel	Lucas Verner	Rebecca Witters
Suzan Oosting	Martijn an den Berg	Diana Vineyard	Laura Young
Hasnalka Szucs	M. Van den Munckhof	Meike Vingerhoets	Andrea Zemel
Nancy Taylor	Sandra Van der Bijl	MaryBeth Von Holle	Ron Zonne
Anna & Charlie Tefoglou	Ton Van der Horst	Wim Vroegop	