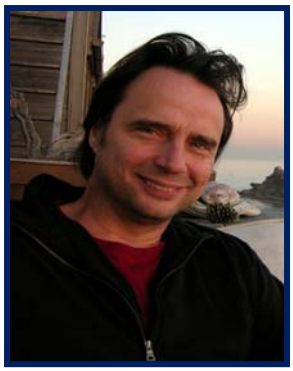

Mark Van Thillo

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Born March 18, 1961
Wilrijk, Belgium

Professional & Business Experience

1991 – Present: Chief Operations Officer and Director, Biosphere Foundation (BF) and its Division the Planetary Coral Reef Foundation (PCRF). On behalf of PCRF, Mr. Van Thillo has provided the technical direction for the development of a variety of innovative programs to preserve and protect coral reefs. These include the operation of PCRF's coral reef research vessel – the only ship continually at sea dedicated to the study of coral reefs on a planetary basis and a project to pioneer an effort to map and monitor reefs from space.

On behalf of the Biosphere Foundation, Mr. Van Thillo is spear-heading a long-term project to place a sustainable human habitat on Mars. Called Mars On Earth®, this is project to build a simulation of an inhabited Mars base here on Earth. The goal is to determine the feasibility of maintaining humans in a space-based self-sustaining system.

1999 – 2005: Vice-President of Technical Systems and Quality Control for Global Ecotechnics Corporation, an international project development and management company.

1994 – 1999: Vice-President of Biospheres, LLC, a private research and development firm designing and building advanced biospheric systems and semi-enclosed biomic systems.

1985- 1994: The Biosphere 2 Project
Mr. Van Thillo was the co-Captain and one of the eight "biospherians" to live for two years inside Biosphere 2, a 3.15-acre Laboratory for Global Ecology. During these years his responsibilities included:

- 1993-1994: Executive Manager of Technical Systems, Space Biospheres Ventures (SBV), AZ. Supervised the operations of and coordinated the maintenance and up-grades of all mechanical systems for Biosphere 2.

- 1991 - 1993: Co-Captain of the first Biospherian Crew and Executive Manager of Technical Systems, Biosphere 2, SBV. Resided inside Biosphere 2 for two years

during its first mission which set world records in waste, water, food, and air recycling.

- 1986 - 1991: Construction Quality Controller for Biosphere 2 (SBV) called a "marvel of engineering" by Science.

1983-1986: Chief Engineer on R/V Heraclitus during the "Around the Tropic World Expedition," studying agricultural and coral reef systems.

1981-1982: Production Assistant, Petrochim Belgium

Education:

1990: Preventative Maintenance Program, AZ State University
1989: Vibration Monitoring in Rotating Machinery, Up-date International
1982-1986: Institute of Ecotechnics, ecotechnic training in total systems
1974-1978: A3 Mechanics, Don Bosco Technic Institute, Belgium

Memberships:

1994: Fellow, Explorers Club
1992: Member of the Institute for Advanced Studies in Life Support
1988: Founding Member for International Hypersonic Research Institute

Technical and Scientific Experience:

1998 – present: Closed system research; R & D for Mars On Earth®
1995 – present: Coral reef research worldwide
1995 – 2003: Participated in an R & D Program to develop the Coral Reef Satellite Mission: a project to put a satellite in space to map and monitor reefs and create an urgently needed first comprehensive baseline map of living coral reefs. Partners in this effort included the Massachusetts Institute of Technology (MIT) and the Scripps Institution of Oceanography.
1993 – 2005: Waste recycling research and development - Wastewater Gardens®.
1995 – 2005: Closed systems research and development with a 12' closed system chamber, Laboratory Biosphere – a test chamber for the Mars On Earth® Project.
1992-1993: Research on the Health and Vitality of Coral Reefs in Biosphere 2, (SBV)
1991-1993: Research on the Mass balance in the water cycles of Biosphere 2, (SBV)
1991-1993: Research and Development of an expert system to manage overall Biosphere 2 rainfall and water cycles, (SBV)
1990-1992: Research and Development of artificial marine systems , (SBV)
1986-1990: Closed ecological systems research and development with a 14,000 cu ft test module, (SBV)
1988-1991: Design and implementation of the Preventative Maintenance Program, Biosphere 2, (SBV)
1983-1986: Research on Microbial Sampling of Tropical Reefs Around the World, University of Hawaii (Dr.Claire Folsome) joint research project with the Institute of Ecotechnics.

Diving:

1984 – Present: Diving expeditions on all the major reefs in the world
1996: NAUI Instructor

Expeditions:

1995 – Present: A planetary coral reef expedition around the world on board PCRF's research vessel.
1991 - 1993: Two year expedition in Biosphere 2; the longest human habitation in a closed ecological system.
1983-1986: Around the Tropic World Expedition on an 82 ft sailing vessel
1983: Santa Fe and Chisolm trail expedition by horse and chuck wagon, from Santa Fe to Fort Worth, Texas.
1979-1986: Private expeditions To India, Sri Lanka, Nepal, Mexico, Central America, Nigeria, Egypt, Sudan, Djibouti, Yemen, Somoa, Seychelles, Singapore, Malaysia, Indonesia; Traveled extensively in Europe, Australia, and North America

Languages

Fluent in English and Dutch.

"Studio of the Sea" films:

Studio of the Sea is a project of the Biosphere Foundation that has made over 40 mini-films about life at sea, ocean challenges and island cultures. Its archive consists of 3 terrabytes of HD and DV footage. The films are online at www.studiooftheseа.org.
The most well known include:
Water Music & *Mbambanga Dance.* 2008. World Water Expo Zaragoza Spain.
Whaling Wall. 2008. YouTube
Canary is Dead. 2008. Link TV
Deep Trouble. 2007. YouTube
Going, Going, Gone. 2007. YouTube
Canary is Dead. 2007. Current TV
Our World – A visual journey into Biosphere 2. 2006. YouTube
Studio of the Sea. 2005. Link TV

Documentaries:

Canary is Dead. 2007. Producer, Current TV

An Inconvenient Truth. 2006. Academy award winning film by Paramount Classics and Participant Productions. 2006 that featured the work of PCRF and the fact that coral reefs are an early warning sign for global warming.

Dragon of the Seas. 2004. 52 minute documentary film about the PCRF Coral Reef Research program by ADR Productions, France.

Indonesia Beyond the Reefs. 1999. 90 minute National Geographic Television program about Raffles Marina Marine Parks of Indonesia expedition with PCRF.

The Coral Dance. 1998. 30 minute documentary film on the PCRF Coral Reef Research and Wastewater Gardens by Japan Asahi TV, French Canal + TV, and British 3BM Production.

Buddha and the Biosphere - Vis a Vis. 30 minute documentary about life inside the two year Biosphere 2 project by Point du Jour - France 3 - Borromeé Productions.

Numerous international films about the Biosphere 2 project. 1986-1994

Biosphere 2 Video Productions:

2006:	Producer, "*Our World – A visual journey into Biosphere 2*"
1992-1993:	Producer, "*Up-date news*" on Biosphere 2 for Belgium TV
1992:	Producer, "*Up-date news*" on Biosphere 2 for French TV
1983-1986:	Assistant Cameraman, twelve part film series, "*Journey to Other Worlds*"

Publications:

Alling, A., Van Thillo, M., Dempster, W., Nelson, M., Silverstone, S., Allen, J. 2005. *The Mars On Earth® Project: Lessons Learned from Biosphere 2 and Laboratory Biosphere Closed Systems Experiments*. Jpn. So. Biol. Sci. Space, Vol. 19, No. 4: 250-260.

William Dempster, J.P. Allen, A. Alling, M. Nelson, S. Silverstone, M. Van Thillo. 2005. *Atmospheric dynamics in the Laboratory Biosphere with wheat and sweet potato crops.* Advances in Space Research. 2005; 35(9):1552-6.

M. Nelson, W.F. Dempster, S. Silverstone, A. Alling, J.P. Allen and M. Van Thillo. 2005 *Crop Yield and Light/Energy Efficiency in a Closed Ecological System: Two Laboratory Biosphere Experiments.* Advances in Space Research 35 (2005) 1539-1543.

Dempster, W.F., Van Thillo, M., Alling, A., Allen, J.P., Silverstone, S., Nelson, M. 2004. *Technical review of the Laboratory Biosphere closed ecological system facility*. Adv. Space Res., 34, 1477-1482.

Nelson, M., W. Dempster, A. Alling, J.P. Allen, R. Rasmussen, S. Silverstone and M. Van Thillo.2003. *Initial experimental results from the Laboratory Biosphere closed ecological system facility*, Adv. Space Res. 31(7):1721-1730, 2003.

Alling, A, Nelson, M., Silverstone, S and M. Van Thillo. 2002. *Human Factor Observations of the Biosphere 2, 1991-1993, Closed Life Support Human Experiment and Its Application to a Long-Term Manned Mission to Mars.* Life Support and Biosphere Science 8:71-82.

Nelson, M., Alling, A, Dempster, W.F., Van Thillo, M. and J. Allen.2002. *Integration of wetland wastewater treatment with space life support systems.* Life Support and Biosphere Science 8 (3/4):149-154.

Nelson, M., Alling, A, Dempster, W.F., Van Thillo, M. and J. Allen. 2003. *Advantages of using subsurface flow constructed wetlands for wastewater treatment in space applications: ground-based Mars Base prototype*. Advances in Space Research 31 (7): 1799-804.

W. Dempster and M. Van Thillo. 1993. *Maintenance and Operational Support Characteristics of Biosphere 2.* Invited paper to the Space Programs and Technologies Conference, AAIA, Washington, DC.

M. Van Thillo. 1993. *First Reflections on Two Years Under Glass.* Kronos, Germany.