

Solar powered ship to travel the world

By LOUIS MAKIELLO
Epoch Times Staff

The world's largest solar powered ship made its first public appearance at the Hamburg port festival in Germany May 7-9.

The catamaran, christened PlanetSolar, is almost 102 feet in length and designed to sail around the world using sunlight alone. It was a star attraction at the festival.

PlanetSolar was built in Kiel, Germany, and weighs about 94 tons. Its top speed is 14 knots (about 16 miles per hour), and it has a respectable cruising speed of 7.5 knots. The ship is covered with about 5,700 square feet of photovoltaic solar panels. Using energy stored in batteries, the ship can sail at cruising speed for three days without sun.

PlanetSolar will depart from the South of France in April 2011 and will stop at New York, San Francisco, Darwin in Australia, Singapore, and Abu Dhabi before returning to France 160 days later.



LARGEST SOLAR POWERED SHIP: PlanetSolar is a 102-foot catamaran designed to sail around the world with solar power. COURTESY OF PLANETSOLAR

A crew of three or four will man PlanetSolar on its ocean crossings, but the boat will have up to 40 people onboard during the promotional trips planned for each stopover. The crew includes Frenchman Gérard d'Aboville, who is famous for rowing alone across the Atlantic and the Pacific.

The 31,000-mile route will take PlanetSolar across the Atlantic Ocean, through the Panama Canal, across the Pacific and Indian oceans, over the Red

Sea, and through the Suez Canal. Organizers are considering changing the last stage of the voyage as they fear Somali pirates might hijack the ship. Instead of going through the Red Sea, the ship could go around Africa, past the Cape of Good Hope. This would take it far from the equator and its vital sunlight.

The project is the idea of Swiss paramedic, pilot, and engineer Raphaël Domjan, who will be captain. He has obtained the backing of various com-

panies, institutions, and personalities. They include a Swiss watch company, a solar power company, the Swiss government, the great-grandson of writer Jules Verne, sailing record-holder Jean-Luc Van Den Heede, and famous diver Albert Falco.

"During our round-the-world tour, we will have to manage whatever energy nature gives us," said Raphaël Domjan in a press release. "We will have to constantly optimize our route and speed in line with the available sunshine and the medium-range weather forecast. No one has ever undertaken such a task."

Unless it capsizes, sinks, runs aground, turns back, or breaks down, PlanetSolar will set several world records. This will be the first ever round-the-world voyage, the first Indian Ocean crossing, and the first Red Sea crossing by a solar powered boat.

Despite certain limitations (night lasts six months in the Arctic Ocean), solar powered ships can cruise indefinitely. Until now, only sailing boats and nuclear powered vessels have enjoyed such limitless freedom.

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Canada's Aboriginal people are the key to Boreal Agreement's success

By DAVID SUZUKI with FAISAL MOOLA

Environmental groups, including the David Suzuki Foundation, surprised many people recently by joining with the logging industry to unveil the largest forest conservation agreement in history. The Canadian Boreal Forest Agreement covers more than 72 million hectares of northern wilderness stretching from British Columbia to Newfoundland and Labrador.

Under the agreement, 21 forestry companies, all members of the Forest Products Association of Canada, will halt logging on 29 million hectares of wildlife habitat while plans for new protected areas and caribou conservation are developed. This habitat is critical to the survival of woodland caribou and other endangered species. The forest companies have also agreed to shift from conventional logging practices to more ecologically sustainable forestry methods, called ecosystem-based management, on the rest of the land base. In return, the environmental groups will suspend their "do not buy" campaigns against companies participating in the agreement while it is being implemented.

For many conservationists, the motivation for entering into negotiations with industry was the urgent need to stop the "bleeding" in boreal woodland caribou habitat. According to a federal government report, many of Canada's caribou herds face extinction if status quo industrial practices that lead to further habitat loss and fragmentation, like logging and road-building, aren't stopped.

One herd in the foothills west of Hinton, Alberta, is critically endangered. Close to 82 per

cent of the Little Smoky herd's habitat is now degraded by a mosaic of clearcuts; crisscrossed with roads, seismic lines, and oil and gas pipelines; and pockmarked with well-heads. Scientists believe this herd and, in fact, every herd in Alberta, will go extinct unless we work to protect current habitat and restore damaged habitat.

Caribou aren't the only species in crisis. Grizzly bears, American marten, wolverine, and many waterfowl and songbirds are slipping away in parts of this massive forest region. Indeed, boreal forests across the planet are facing a perfect storm of threats, as revealed by a study in the Proceedings of the National Academy of Sciences. The study showed that in recent years, these areas have lost more forest cover to resource development and natural disturbances exacerbated by human-caused climate change, like catastrophic insect outbreaks, than any other biome on the planet—including tropical rainforests, such as the Amazon.

Although the scale of the agreement is historic and the level of trust and cooperation between environmental advocates and their former adversaries is unprecedented, both parties understand that final decisions rest with federal, provincial, territorial, and Aboriginal governments.

Much of the boreal is First Nations traditional territory, and in most cases, Aboriginal and treaty rights and title issues remain unresolved. Throughout the boreal, the government is legally obligated to consult with Aboriginal people as the traditional stewards of these lands. This means that, although forest companies have voluntarily put the imminent threat of further logging in caribou habitat on hold, Aboriginal people must

work out the ultimate fate of the forest with provincial, territorial, and federal governments.

Thus, the success of this world-class effort to protect the boreal will depend in large measure on the support and leadership from Aboriginal people. As noted by Chief Ghislain Picard of the Assembly of First Nations of Quebec and Labrador, "The intentions [of the Boreal Agreement] are good but must obviously be backed up by a genuine and tangible willingness to involve the First Nations that have rights over these lands."

We agree. The Agreement recognizes that "Aboriginal peoples have constitutionally protected Aboriginal and treaty rights and title as well as legitimate interests and aspirations." This is a start. But as Chief Picard warns, the environmental groups, logging companies, and provincial and federal governments must now ensure that the Aboriginal people of the boreal are fully involved, supported, and receive tangible benefits from its conservation and ecosystem-based forestry development.

Indigenous people have been at the forefront of some of the greatest conservation victories on the planet, from the protection of the world's largest tropical rainforest by the Kayapó of southeastern Amazon to a more recent agreement between the Dehcho First Nation and the government of Canada to protect 30,000 square kilometres of boreal wilderness in Canada's Northwest Territories. These earlier victories, achieved by working with Aboriginal people and their governments as partners, offer examples of how the Boreal Agreement must proceed if it is to successfully deliver on its ambitious vision.

Take David Suzuki's Nature Challenge and learn more at www.davidsuzuki.org

Alzheimer's disease: A growing public health challenge

By ANNE PILLSBURY

A chronic, degenerative disease is presenting an enormous public health challenge on a global scale, and it isn't a new strain of influenza, HIV-AIDS, or TB.

It is Alzheimer's disease. Within the next 30 years, Alzheimer's is projected to increase from the 35 million affected worldwide today to a staggering 116 million. China alone has 19 million people diagnosed with the disease.

This is why the World Economic Forum met in London in January to evaluate the socio-economic impact of Alzheimer's on member countries. The projected cost of the disease worldwide in the next three decades is estimated at upwards of \$130 billion.

According to the 2010 study "Rising Tide: The Impact of Dementia on Canadian Society," 1 in 11 senior Canadians suffers from Alzheimer's or other forms of dementia.

"These findings are a reality check because the fact is that our baby boomer generation is aging and the incidence of dementia is increasing," Jean Blake, CEO of the Alzheimer Society of B.C., said in a press release during Alzheimer Awareness Month in January.

"The impact will be felt by everyone, not only as a cost to the healthcare system, but the economic and social costs to caregivers and families."

AD is characterized by a progressive degeneration of brain neurons and consequential loss of cognitive functions.

As part of its Centre for Studies on Aging, McGill University has been conducting clinical trials on patients with AD since 1997 through its Alzheimer's and Cognitive Disorders Clinic. However, a cure remains elusive—as does pinpointing the cause of the disease.

Studies conducted at the Western Australia Centre for Health and Aging found that high levels of

luteinizing hormones were linked to Alzheimer's disease and poor memory.

A recent article in Psychology Today suggests that an overactive stress response can lead to possible memory breakdown: "Chronically high cortisol has been shown to cause brain cell dysfunction, to kill brain cells, and to cause atrophy of the brain."

As scientists search for a cure for AD, communities at the local level will have to create strategies that can meet the rising tide of care and costs associated with this debilitating disease.

It is generally agreed that dementia associated with depression, a niacin or vitamin B12 deficiency can be reversed. But this is not the case with Alzheimer's, otherwise known as primary dementia.

Because the progression of the disease is non-acute, it may take years to reach a clinical diagnosis. In addition, friends and family may associate small disruptions of memory or behaviour as age-related rather than disease centric.

Therefore, being familiar with the Global Deterioration Scale, which outlines the 7 stages of Alzheimer's, may be helpful to both family and caregiver. It can aid in conceptualizing a care plan and preparing the family emotionally and financially for eventual around-the-clock care for their loved one.

AD may first manifest as mild memory loss and forgetfulness with familiar objects like keys or eyeglasses. Answers to simple questions such as "What did you do yesterday? What did you do today?" will demonstrate a decreasing capacity for recall.

Eventually, extensive damage in the cerebral cortex—the centre for reasoning, understanding, communication, problem solving, and differentiating dates and times—will reveal marked cognitive decline and functioning.

This is when activities of daily living become dramatically challenged. At end-stage, care is required 24/7. Difficulty eating, swallowing, dressing, and control of bodily functions necessitate the full at-

tention of the caregiver.

At this point, the role of the caregiver cannot be understated. A caregiver can be a family member, close friend, or a certified care attendant working in a residential facility, special dementia unit, or the home.

While the nurse makes assessments and acts as a bridge between the caregiver and the doctor, the caregiver provides the hands-on nursing care from moment to moment.

Should the care attendant lack the qualities of a professional caregiver—compassion, empathy, integrity, and an informed knowledge and skilled understanding of the disease—the Alzheimer's patient could be at risk. Their quality of life could be diminished, not to mention the possibility of neglect or abuse.

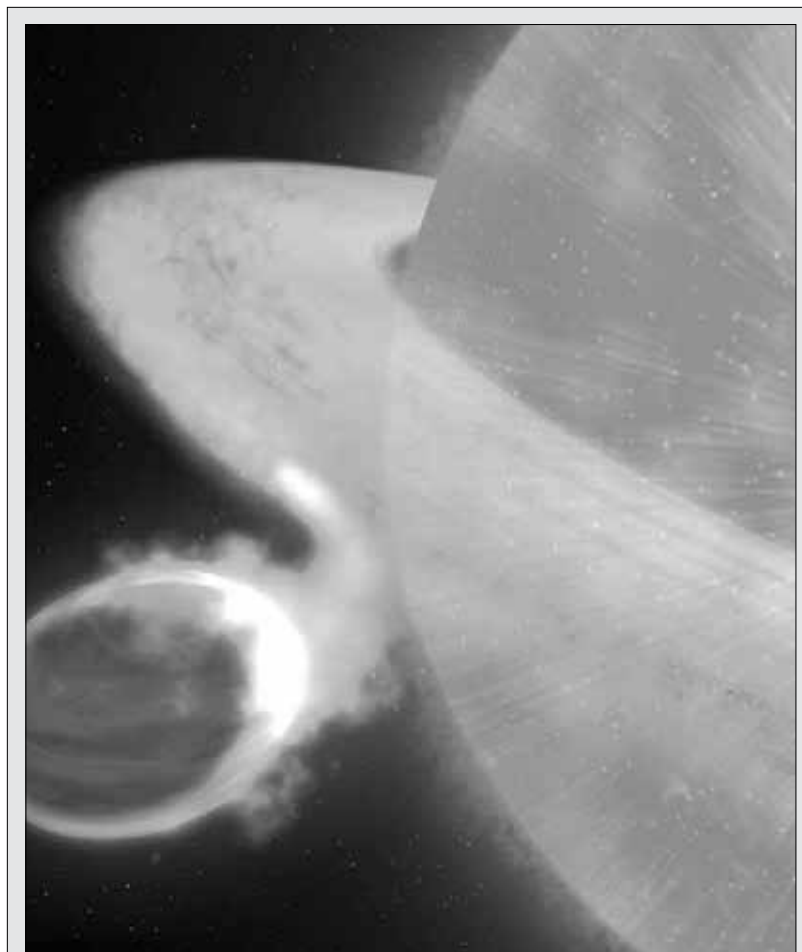
The University of Victoria Centre on Aging sees the value of the caregiver in the clinical outcome of those suffering from AD. The university has two ongoing studies to measure the right balance between medication prescribed by the physician and care given by caregivers.

"These two research studies will deepen our knowledge of how effective various medications are for Alzheimer's," Dr. Neena Chappell of the Centre on Aging, said in a release.

"Caregivers understand in a very unique way what is working and what is not working as a result of the medication: we need to listen to caregiver's own insights."

The question is, can the supply of caregivers keep up with the demands of the disease and its growing numbers?

Anne Pillsbury obtained her undergraduate degree in Massachusetts, and did graduate studies in Pennsylvania. She worked for 12 years in The Philippines, Australia, and the USA with an international NGO. She is presently doing coursework in international development and allied healthcare.



Artist's View of Extrasolar Planet WASP-12b
NASA, ESA, and G. Bacon (STScI) • STScI PRC10.15

A Planet Being SUCKED IN: An artist's illustration of WASP-12b being consumed by its parent star WASP-12. NASA, ESA, AND G. BACON/SPACE TELESCOPE SCIENCE INSTITUTE

Medical treatment: Less is more

By DR. JOHN BRIFFA

Sometimes when I'm lecturing, I talk a bit about conventional medicine. There are undoubtedly parts of orthodox medicine I am enthusiastic about, including hip replacements and cataract surgery.

The problem is that much of medicine is stunningly ineffective. And it's not without risks. My opinion is that conventional medicine is not as effective as its image suggests, and it is riskier.

I generally encourage people to seek conventional medicine when they need to but not to rely on it too heavily. I also like to challenge the idea that the more money and resources we throw at health care, the better off consumers are.

A few years back, I became aware of a curious phenomenon: When doctors go on strike, death rates fall.

One possibility is that conventional medicine kills more people than it cures. This may seem utterly counter-intuitive, but I believe it's a phenomenon that should not be dismissed. Bearing in mind the ineffectiveness of much of medicine and the hazards associated with it, perhaps medicine does actually kill more people than it cures.

If this is true, then we may need to revisit the notion that the more health care we provide to people, the better off those people will be. And this is precisely the theme of an editorial that appears in the latest edition of the Archives of Internal Medicine.

This editorial starts by citing evidence published in the February 2003 edition of the Archives of Internal Medicine that shows that some measures of health are actually worse in areas where people receive more health services. The editorial itemizes just a small sampling of conventional medical care that at best appears not to work at all well, and at worst exposes individuals to unnecessary risks, including:

- Arthroscopic debridement (cleaning up) of knee joints.
- The use of antidepressants in individuals with mild depression.
- Mammography in younger women.
- CT scanning of kidney stones to follow their progress (no benefits, but increases the risk of radiation-induced cancers).

The authors of the editorial make the case that there's the potential for some cost cutting, though this may be perceived as rationing. However, as they quite rightly point out: "Rationing implies that the care being withheld is beneficial and is being withheld simply to save money. But as we have noted above, there are many areas of medicine where not testing, not imaging, and not treating actually results in better health outcomes."

The authors also refer fleetingly to some of the reasons why doctors may provide more care than needed. These include:

- Payment systems that reward procedures compared with talking to patients.
- Expectations of patients who may equate testing and treatment with better care.
- The glamour of technology.
- The ease of writing a prescription or test instead of explaining to patients why they are not being treated.

What the authors do not mention is the sometimes-cynical attempts of the pharmaceutical industry to paint their products as better and safer than they really are, to invent illnesses for which they have the magical solution, and to promote the use of their drugs for types of patients or even conditions that extend beyond what the evidence supports.

The authors announce that the Archives of Internal Medicine will be running a new series under the heading "Less Is More," which will highlight situations in which less care is likely to result in better health. My sense is that the Archives of Internal Medicine will be able to tap into a very rich vein.

I remember reading a piece some years ago about medical care that made similar points to this latest editorial. I don't remember the details. What I do remember is the assertion that some doctors could do with being told: "Don't just do something—stand there!"

Dr. John Briffa is a London-based physician and author with an interest in nutrition and natural medicine. His website is Drbriffa.com.



CT SCANNING: Using this technology to diagnose the progress of kidney stones has no benefits and increases radiation-induced cancer risk.

ALEX WONG/GETTY IMAGES