Cure for Depending on 90K Oil Spewing Cargo Ships: Sail Power Makes Inroads, Now in Mediterranean

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Announcing: Aegean Cargo Sailing (SAIL MED)

• Food security • Local development

• The Blue Economy • Healthy Seas

In a fast-changing world, it is no longer possible to automatically assume that what one is used to will endure. People want stability and predictability, but, as they say, good luck with that. We are witnessing out-of-control evolution of a rapid, uncertain sort. Fortunately, there are pro-active initiatives that have seized the imagination of thinking people who think of the Earth as a community to share. They look ahead in terms of decades and even centuries instead of mere days or quarterly periods.

As an environmental activist looking for answers to pollution and disastrous land use, after 1988 when I left the service of the oil industry and government, I eventually came upon the revival of sail transport as a most promising potential sector. That was in 1999. Fast forward to 2017, and much progress has been made by the sail transport movement, especially since 2008.

The outstanding success that has endured since then has been that of the Fairtransport organization in the Netherlands. Their first ship was the Tres Hombres, a 32-meter brigantine, built by volunteers. It has now completed ten transatlantic voyages carrying cargo from the Caribbean back to northern Europe, without an engine. Among several other sail transport projects, Timbercoast's Avontuur cargo schooner, at 44 meters long with a cargo capacity of 70 tons, is the other standout. Since last year it is operating from Germany to the Caribbean and back.

This year is now seeing — as I write these lines — another step forward: like Fairtransport and Timbercoast, it marks a noteworthy and practical embrace of sail power for moving cargo via clean, renewable energy known as the wind. In the eastern Mediterranean, Aegean Cargo Sailing is a demonstration project now underway (June 2017) to highlight high quality island products for a broadened market that caters to the ecologically sensitive. This niche market for food and beverage items, like in northern Europe, is growing and worth pursuing. Furthermore, with an eye to the future, when climate change and the energy mix will be sure to challenge today's unconscious shopping within the corporate consumer economy, solutions must also promise local economic health and meaningful work for the new generation.

Aegean Cargo Sailing visits 6 islands as well as the Greek mainland province of Attica, spreading the word and the tastes of a sustainable future. (See the
voyage blog).

The current vessel the for project, the sloop Pelago, only carries one tonne [one metric ton, or 2,204.6 pounds] of cargo. But it serves as sufficient "proof of concept" for motivating people from various walks of life who have become, or may become, involved as supporters or self-starters of similar efforts.

Defenders of the status quo, however, resigned to the immense trade volumes (and pollution) of the 90,000 oil-burning cargo ships operating today, are correct that sail transport trade amounts to just a drop in the bucket.

Yes, for now. However, an historic trend starts with one small step. Think of many sailboats eventually commencing cargo transport, whether small sloops originally designed for recreation of living aboard, or larger vessels approaching clipper ships of 150 years ago that sailed faster than today's modern cargo vessels. The drop in the bucket is no longer a drop in the bucket.

The island stops as shown in the accompanying map, starting from the port of Lavrio, are Kea, Andros, Tinos, Mykonos, Ikaria, and Samos. The end of this voyage is a marina near Athens, enabling us to get the products to a cooperating health food store to display sail transport's potential for bringing goods to customers without oil and its inherent pollution. Organic and fair trade are wonderful developments, but what good are they if the transport is filthy and unsustainable?

On land, pedal power and animal power, combined with proximity, are the way to go, and we are intensifying of efforts in this regard. But the need for long-distance transport has been a fixture of human society, and this need will only grow as local ecosystems are discovered to inadequately provide for huge populations. By now most of us have learned that unending oil dependence and its attendant harms is no answer, if long-term survival is to be planned rationally and honestly.

Valia Stefanoudaki, coordinator of Aegean Cargo Sailing products, is shown here on the island of Andros in one of the many traditional local-product shops on Aegean islands. This shop is called "Biologos" (= organic), and was one of the first collaborative shops visited in the debut voyage. Valia wears the SAIL MED t-shirt of the Aegean Cargo Sailing crew. She and her mates report that shops and suppliers are reacting enthusiastically over clean, attractive sail transport for their goods, perceiving enhanced value generated.

Since oil-burning cargo ships kill around 60,000 people a year with sooty emissions, and the total annual global CO2 emissions from 90,000 motorized ships constitute what would be the sixth largest-ranking nation in the world, it is high time to adopt means of low-cost, clean, renewable energy that are here and now. Considerations include food security, local development, the idea of a Blue Economy, and healthy seas (each of which is examined below). Addressing the issues raised can help counter the global, haphazard practices and systems threatening life as we know it.

Unfortunately, faith in government and industry has meant unending, unchecked emissions that the United Nations and its International Maritime Organization have done next to nothing about in the 20 years since the Kyoto Protocol. The slow pace along with greenwashing aids only entrenched industry. But can we all just keep shopping, and assume that Mother Nature will keep providing, keep forgiving, and allow us to just wait until modern society is good and ready to make more intelligent innovations that secure a livable future?

A recent news item: "Cargo Shipping Market to Witness an Annual Growth Rate of 3.45% from 2017 to 2023".

This projection is possible only if there are no major events in the world oil market to significantly curtail supplies. Additionally, as oil products are hugely subsidized — with "externalities" of pollution, etc., paid for by the rest of society, such as those buying food — this state of affairs would need to remain unchanged. Never mind the impossibility of endless

growth on a finite planet.

Food security

Local food production for food security and for avoiding long-distance oil consumption for transport is a crucial foundation for our common future. How can this be achieved under the corporate economy that rewards large economies-of-scale trade and distribution via dwindling fossil fuels?

Sail transport has potential as a vast, low-tech, albeit lower-volume means of bioregional and trans-ocean sharing of surpluses. A given ecosystem diminished by harmful development and loss of arable land can rarely provide all the food or kinds of food that a population needs for survival. Indeed, the secure exchange of surpluses via sailing between coastal and island communities enhances the quality of nutrition for populations who have become distanced from local self-sufficiency. One Greek island is known, for example, for potato production, while another is known for split peas — both enjoyed by most of the whole nation. It makes sense for any surpluses to be exchanged — in a sustainable fashion that won't be affected by the next geopolitical oil supply shock.

For those of a mind to consider coffee and chocolate part of food security, they are welcome to this charming mindset as long as there is sailing from the tropics to the high-populated temperate regions that cannot grow those addictive, sensual crops.

Local development

Local development for a sustainable economy closely depends of food security. However, employment and the vital use and revival of skills for a community's general resiliency are related requirements, and are addressed by sail transport and the cargo sailing sector's future. Also, a resilient economic system, sometimes called the Blue Economy, must be local-based instead of a U.N.- or E.U.-driven system out of reach of the average citizen.

Jobs today are primarily in the service of the corporate consumer economy. While this serves many workers, and especially benefits the few who profit greatly on the fossil-fuel based system of energy, transport, and agriculture, the fact remains that unemployment and a poor outlook shared by millions of citizens of developed economies are preventing uncounted working-class people from thriving or getting by with dignity.

Fortunately, the history and legacy of traditional sailing networks and shipbuilding have not disappeared from memory. Examples through successful, small-scale project have been reviving the sailing of cargo, primarily in northern Europe. SAIL MED is tapping into young persons' desires to work at meaningful positions that are not limited to serving drinks to tourists or vending souvlakis to increasingly cash-poor consumers. While the older generation's strengths and knowledge for community-based trades and services are still present — but being inexorably lost day by day — young people in search of work and convivial, meaningful activity can anticipate finding or creating jobs or small businesses.

Additionally, growing numbers of people find air travel to be unjustifiable due to inefficient, wasteful, toxic fuel consumption. Some of these folk wonder about sailing as the long-term answer for travel across oceans. But, for now, it is the moving of cargo and building local self-reliance that emerge as the priority.

The prospect for greater local development depends on nurturing today's established home-production, for example of wines, olive oil, olives, and produce — typified by much of Greece. These highly prized but common items are primarily traded or gifted on a person-to-person basis. This can be enhanced and expanded in order to encourage greater local food sources' availability through interdependency and cooperation, rather than everyone's waiting for a job-opening involving impersonal, distant employment and the unlikely return of debt-related economic growth.

Additional benefits of local development include more feasible protection of the environment than from top-down policies and regulations that only serve out-of-touch, distant corporations and government technocrats who seldom have any role in enhancing sustainable, non-fossil fuel, local development.

The Blue Economy

Thus far, the Blue Economy is mostly limited to an NGO-oriented and government-agency initiative, promoted via conferences and technical papers. Many of the "Blue" principles of cleaner seas and appropriate industry are within reach, but limiting and overriding the vision are entrenched business interests; they stand for the status quo of unsustainable development, emitting regulated but massive pollution, and unending industrial growth on a finite planet.

Clean, renewable energy has yet to include sail power for a Blue Economy, so today's small sail transport movement needs to pursue on all levels the kind of growth that helps people and the environment. Solar panels have a place, but few people look at the issues of questionable net-energy-yield and the limitation of generating only electric power. Two approaches are complementary:

• establishing local or regional, small scale cargo and passenger trade utilizing sail power;

• following through with the "Ecoliner" approach for higher-volume cargos, to utilize modern ports currently given over to massive ships and high-tech dock complexes for recently constructed, modern harbors. Such facilities are no longer part of historically established cities or real communities.

The chief reasons for modifying the present fossil-fuel dominated economy, as to transport, are long-term oil supply and climate-protection considerations:

• Conventional crude oil reserves have been on a depletion trajectory worldwide since 2005. Supplies of oil for ships, planes and trucks, agriculture, etc., have had to rely on increased subsidies. As higher-cost, lower net-energy-yield oil is counted on to stretch supply indefinitely — via fracking and deep water, frozen-environment extraction — the domination of oil and its refined fuels for transport makes less and less sense. To address this requires sound planning, innovative policies, and better technology, to be understood and pursued by the citizenry instead of technocrats and corporate-bottom-line careerists. A sudden oil supply crisis can threaten today's commerce and consumers' tenuous security. The 90,000 "oil boats" moving cargo will someday be lamented as non-renewable-energy dinosaurs.

• CO2 emissions from shipping have been growing out-of-control, and are set to continue doing so. Up to 250% greater emissions have been forecast to occur by 2050. This state of affairs is due to the lack of regulations and pro-industry allegiance by the International Maritime Organization, which has not followed UNFCCC guidelines for protecting the climate. As extreme weather continues to worsen and exact exponential costs, and climate-change related migration accelerates, people will look to clean-energy transport that sail power offers.

Last but not least: Healthy Seas

In addition to species impacted directly by oil spills, the related crises of the plastic plague, poison runoff, and improper disposal of toxics call us to take action.

Some 20% of sea pollution comes from the deliberate dumping of oil and other wastes from ships, from accidental spills and offshore oil drilling. But of all the sources of marine pollution, the discharge of oily engine wastes and bilge from day-to-day shipping operations may be the worst, because it is steady and occurs everywhere.

Dolphins and countless other species, including humans, were severely impacted by the BP/Deepwater Horizon oil blowout in the Gulf of Mexico in 2010 (see photo).

Instead of trying to solve the ongoing oil pollution crisis long-term, by reducing oil demand (see WorldOilReduction.org), the Obama administration mainly promised to fine the perpetrators and achieve a “clean energy economy” (some day).

The next three photos show the ongoing damage at countless Greek beaches and watersheds:

WD-40 is one of myriad toxic petrochemical products that are not only misused and often unnecessary, but improperly disposed of.

Next picture below: Poison run-off — non-point-source pollution — harms wildlife on land and sea. Abandoned or still-functioning motor vehicles are, in the minds of many consumers as well as vehicle-manufacturer/sales people removed from “externalities” — part of the deadly pact that corporate industry has made with society in the name of convenience, progress, and jobs.

The next photo below shows plastic trash on beaches, which is much worse in some places, but rarely absent completely. Plastic from petroleum does not biodegrade, but easily enters the food chain while bio-accumulating in species.

Petroleum refineries keep producing toxic, non-biodegradable plastics, as part of the facilities’ requirement of high utilization of refining capacity. The oil and natural gas industries rely mainly on gasoline and diesel for profits, but to maximize those products, the manufacture and distribution of other products such as plastics, pesticides, dyes, asphalt, and more, must be maintained at all costs. One result is that plastic particles are increasingly supplanting plankton in terms of volume. This was discovered almost 20 years ago by Capt. Charles Moore, author of Plastic Ocean. He is an active supporter and promoter of Sail Transport Network (SAIL MED’s parent organization).

Since conventional cargo shipping is guilty of more oil spillage on a daily basis, from emptying bilges, than all the high-profile wrecks of tankers and other ships, the poor performance needs a remedy such as sail power and a reduction in much consuming of unessential products. Unreported “accidents” not only harm sea life, but are destroying tourism potential. This recurring disaster is what the public is usually aware of. However:

The use of engines and propellers must be questioned, from both an animal-rights perspective and looking ahead to inevitable changes in technology in a post-peak oil world threatened by accelerated global warming.

Engine noise is extremely damaging to sea creatures, such as whales that depend on quiet seas for their communications that stretch for thousands of kilometers under water. This crisis is akin to land birds’ inability to find mates when motor vehicle noise and other disturbances are prevalent.

Propellers chop up sea creatures, particularly when oil-burning cargo ships travel at high rates of speed (e.g., 18 knots per hour). Slower species such as manatees are often bloodied and killed by propellers. Additionally, collisions with ships — likely not the case with sailing ships that go slower — kill whales and many other species on a regular basis. The carnage is not quantified, nor banned in any way. This is akin to roadkill by motor vehicles. Species extinction cannot be allowed to continue to rage in our oceans and other bodies of water, and must be made as well-known as land-based species extinction.

The sail transport movement, while not exclusively engine-free and propeller-free, promises much healthier seas. Expansion of our sector as well as general education will help our fellow creatures and the species that they coexist with and rely on for food.

Conclusion:

The crew and management of Aegean Cargo Sailing, part of SAIL MED and the Sail Transport Network, welcome questions, participation, support, and publicity.

One project at a time, building into an ever stronger, growing movement, means sail transport will prevail not just as an interesting, romantic initiative; it is here to stay. A change in thinking is underway, that of placing sail power among the pantheon of (truly) renewable, (truly) clean forms of energy.

Further reading and resources:

See SAIL MED where you can see the brochures for Aegean Cargo Sailing, printed bilingually for distribution at island shops and elsewhere.

Aegean Cargo Sailing blog for the current voyage.

Fairtransport's website featuring the tall ships Tres Hombres and the Nordlys.

Timbercoast's Avontuur: is presented in STN's photo journalism during the ship's pre-launch phase. Update: The cleanest cup of coffee: Sustainable farming meets low emissions - April 18, 2017, by Maria Galluci

Ecoliner, developed by the SAIL consortium (an EU-funded project): STN reported on SAIL as a participant/observer. Official website of SAIL.

Spinning sail technology is poised to bring back wind-powered ships, Business Insider. George Aggidis, The Conversation, Mar. 21, 2017

Wind-powered Cargo Ships Could Help Cut Your Carbon Footprint Mashable (alternate headline "Small but mighty wind-powered cargo ships may ship your next organic grocery order"). Aug. 3, 2016, by Maria Galluci

(Weak) Emission reduction targets for international aviation and shipping, from the European Parliament - Parenthetical editorializing by STN.

IMO shelves Marshall Islands' call to set a global CO2 target for shipping, from Transport and Environment, a European NGO. May 13, 2015.

Cargo Shipping Market to Witness an Annual Growth Rate of 3.45% from 2017 to 2023 , June 13, 2017. M2 PRESSWIRE via COMTEX, and EIN News

For more articles on all of the above and more, see sailtransportnetwork.org

Jan Lundberg, author, flying Sail Transport Network burgee off Belize, 2008: