



Close your eyes for a moment and imagine the serenity that comes with living at sea.

What would be adventurer has never thought about living on a boat. There is something enchanting about the sea, and it calls without words.

You awake with a cool fresh breeze coming in the open portal while the gentle rocking of your floating cradle that rocked you to sleep is gentle shaking you awake. A smile comes over your face because you have had a beautiful uninterrupted nights sleep listening to the splash of the waves against the hull.

My wife and I set out to see how plausible it would be to actually live on a boat. We bought a 40 foot cabin-cruiser live-aboard. At first glance, it seemed as though there would be enough room. There was a living room / kitchen combo, 2 bedrooms, bathroom with shower, and an open deck. There were two double beds in the aft section and two single births in the bow (front). The galley (kitchen) had hot and cold running water, a three burner electric stove and compact oven, microwave, small refrigerator, full chest freezer and toaster - however you could not run all of them at the same time. The boat was set up to run power from its own generator, or off a hook up to an on shore electrical source. However since the generator used fuel, we plugged in to the marina's outlet as we wanted to see how economically things could be done for this experiment. For living space, a cabin-cruiser is open and spacey compared to a sailboat of the same length. However, if you are planning to do more than just live on your boat, the wind is a lot cheaper than feeding those two Detroit diesels.



Yes, it was doable, but just barely. We figured that there was only about 300 square feet of open deck space and about 250 below deck to be share by two people. It seemed like we were always in each others way. From our experience, we determined that to be comfortable, you need at least a minimum of a 50 foot long boat for two. The 40' is plenty for a single person.

This test was the first experiment with ocean colonization. At that point, we had thought to maybe find some island that was too small to live on and drop anchor, just going to shore when we needed supplies. That never materialized because I realized that the only reason boaters don't congregate by some island is because of the lack of supplies and amenities. The first threads of Marinea had begun to come together.

Living in a marina is okay but rather expensive as you are competing for waterfront property, and the city, state, county and federal taxes and ordinances can make you go broke quick. This is where the disconnect becomes visible. We paid about \$15,000 for our live-aboard and the rent and utilities cost around \$500 per month. Food and restaurants are also more expensive by the sea. We needed internet for business and the marina supplied wifi. But, if you don't make your living via the internet and you don't mind the hassle it takes to just go to the store, then you can save a bundle by dropping anchor off shore.

When Marinea is fully functional, it will be normal and convenient to go to the store (located in the town center) by boat, wifi should also be available even for those that choose not to use the marina's slips. Picture a bustling town center in the beautiful waters of the Caribbean, instead of one on land.

Every persons expectations, desires and experience will be different. We lived on a spacious cabin-cruiser and was a little bit crowded. For a sailboat, I would have thought that it would be very tight but there are many who say they don't need as much space as they thought they would and are very comfortable on a 40' sailboat. You can find out more about others liveaboard experience by visiting live-aboard-living. *1

There are several key differences between Marinea, and other seastead projects. Marinea is the pilot project for colonizing the oceans, and this first village at sea must be self-sustaining, expandable, and capable of being replicated. This research project will be developed in three well thought out phases, check out our website *2 for details.

^{*1} Live-Aboard-Living http://www.liveaboardliving.com/

^{*2} Our website http://marinea.org

While other developers are trying to design a floating city with apartments and everything included all on the one seastead, with costs somewhere in the billions of dollars and years to make - Marinea is thinking small and easy to make happen. Our phase one, developing a town square capable of supporting a small community (mostly living on their own boats), will be operational for less than twenty million dollars^{*3}. At this point the groundwork for expansion will be well underway.

Phase two will see the new housefloats being designed today. Big yards, swimming pools, spacious living, and all the amenities found with living on land. Convient access to stores and utilities. Living space below deck on individual housefloats will be air-conditioned and comfortable. Open air space with a sun cover for shading, and the cover will also gather water when it rains that can be used for showers and laundry. The sun cover will also house solar cells for electricity production.

Where phase one may be considered by some to be more like camping in an upscale campground, phase two should have everything that anyone would expect from living comfortably in a small city.

From our experiences, and from talking with every liveaboard boater that we encountered, we have determined that living on a boat is not only doable but by many, a preferred lifestyle.



Bob Llewellyn / July 2016

^{*3} Catch the wave. http://marinea.org/join/



For my first tech article, I was planning on digging into renewable energy or advances in water purification, but instead I decided to pull back from the weeds and talk about something that has been on my mind for a while – the upcoming technology revolution and how seasteading can play a part.

In Part 1 (this article) I will lay the foundation of the revolution that is coming, and in Part 2 I will discuss how seasteading can play a role in ensuring that the best outcomes prevail.

I have been following technology for a while, and several trends are aligning and maturing towards a new reality, oftentimes called the Fourth Industrial Revolution¹. The first industrial revolution involved harvesting natural resources into mechanical energy. The second, generation of electricity and organizing labor and effort towards a common goal. The third, the development of tools to aid in computation, analytics, and interconnectedness. And finally, the fourth – the alignment of technologies that will enable exponential growth, and will closely integrate with us as individuals and with society transcending the current silos of digital, physical, and biological systems.

That last sentence is a mouthful and always in the early stages of a revolution, the outcomes and scope is difficult to see. But when you look at the emerging technologies and trends

¹ World Economic Forum, https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/

separately: AI, VR and augmented reality, machine learning, robotics, nanotechnology, life expanding and enhancing biology, exponential growth, big data, unlimited energy and technologically provided abundance², 3-D printing, and on and on, a few themes emerge:

- technology will be growing faster than people can keep track of it, and as a result, we will rely more on AI, machine learning, and other systems to understand and manage it for us;
- our lives will be monitored and managed (most of the time without us even knowing about it), and as a result, our technology will handle our day to day tasks giving us opportunities to focus our energies on what drives us;
- our biology will integrate with technology expanding our lifespans and increasing quality of life, through biologically-engineered technology, and computer and physical systems;
- and a new reality will emerge where we live in a hybrid of the physical and the virtual.

And it will be scary, and it will be exciting, and we can stick our heads in the sand but it will not change the fact that this new reality is emerging. It is not the directed efforts of any one group, but is the evolution of our species beyond the physical. And we will no longer be the direct masters of our domain (if we can even claim that we are right now). Is this a bad thing? It is not good or bad, it just is. And we need to understand it so we have a chance to direct it towards a future we want.



The question I leave you with is this: who do we want to entrust with all of this power? Governments? Big Corporations owned by shareholders? Or do we want to take command of this future and decide for ourselves how much we want to integrate with technology and how much power we want to give away vs. how much power we want taken from us?

In the next article, I will discuss how seasteading can offer us tremendous opportunity to not only embrace the future, but also decide for ourselves our place in it.

Mark Stephan / July 2016

^{2&}lt;u>Abundance</u>, Peter Diamandis, http://diamandis.com/abundance



Are we on the brink of another World War?

We point to the population explosion as the need for Marinea to be built and in place for when it is needed. And while this is true, there is a more immediate threat than overpopulation, one where you may need to have established someplace to go should the need arise. I am talking about all out wide spread war.

We have been in a quasi world war for the last couple of years. This prelude to a declared war is as world wide as it can possibly get. China is running war ships very close to US and Japanese Military vessels. Russia has taken a provocative stance by flying jets too close to US war planes and ships. Iran has no second thought about capturing US sailors, and upstarts like ISIS dare to challenge many countries at once. And then there's Korea.

I believe it was Mark Twain that said, "history doesn't repeat itself but sometimes it rhymes".

At no time in history has any country had nuclear weapons prior to going into a war, therefore we can not have a repeat of history but what's going on in the middle east sounds a lot like something I read in a history book once. World war one had a rather similar beginning to what is going on now.

And the thing is that I am not the only one to see this. From RT News we read:

"The world is seeing ever-stronger competition for resources, and some players try to disregard all the rules, Russian President Vladimir Putin has said, adding that potential for conflict is growing worldwide. The situation across the world is becoming less predictable, Putin said at a meeting with Russian ambassadors and permanent representatives abroad." (RT News) *1

A problem is that we don't get unvarnished news from any US media. There are a couple of underground news outlets but we get a very censored version of the news. To find out what is going on here, we have to look elsewhere - like Rand Daily out of South Africa who reports that:

"US believes risk of World War 3 is growing. The Defense Department's new military strategy acknowledges this by noting the implications of the renewed rivalry with China and Russia. The possibility of a major war with great powers, like World Wars One and Two, is "growing," according to the U.S. National Military Strategy released this month.

Consider, the North Atlantic Treaty Organization is back on high alert after Russia's land grab in Ukraine, while the United States and China are competing in an arms race over the Pacific Ocean. When the nominee for chairman of the Joint Chiefs of Staff recently testified before Congress about the most critical security threats, he led with Russia, not Islamic State." *2

One of the best underground news source in America is former Assistant Secretary of the Treasury Paul Craig Roberts who has become a national whistle blower. When he talks, Wall Street listens, and what he has to say is frightening:

"War Is Coming". Let me copy one of his paragraphs to show his level of reasoning. [As reported by Tyler Durden of *Zero Hedge*, the Russian response to the extra-legal ruling of a corrupt court in the Netherlands, which had no jurisdiction over the case on which it ruled, awarding \$50 billion dollars from the Russian government to shareholders of Yukos, a corrupt entity that was looting Russia and evading taxes, is telling. Asked what Russia would do about the ruling, an adviser to President Putin replied, "There is a war coming in Europe." Do you really think this ruling matters?"] *3

Well, what we think doesn't matter to them, but what they think certainly matters to us. It makes sense to have a fire escape even though you hope that you never need to use it. Unfortunately, the 'fire' that the world now faces comes at the end of

'ready, aim, ... '

^{*1} RT News https://www.rt.com/news/348986-putin-resource-rivalry-rules/?
https://www.rt.com/news/348986-putin-resource-rivalry-rules/?
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^{*2} Rand Daily http://www.rdm.co.za/politics/2015/07/20/us-believes-risk-of-world-war-3-is-growing

^{*3} Paul Roberts http://www.paulcraigroberts.org/2014/07/28/war-coming-paul-craig-roberts/

For those of us looking and planning for a brighter tomorrow, this scenario brings mostly just sadness. We know that the oceans are the safest place on the planet, building villages at sea will provide that port in the storm. On the water or under the sea are safe places to wait out a storm. A submarine could go right through a nuclear firestorm and never know that it had happened, until they surface of course. We have the skills right now to build submarines, we also have the skills to build rugged ocean homes - floating far from the dangerous land dwellers and their crazy no-win wars.

The fact is that there is no sure way of knowing if all the rhetoric is a good indicator of future events or not. However, by helping us to build Marinea, you will have helped to create that 'port in a storm' should the need arise. Marinea's Village At Sea will also be a nice place to live, where freedom reigns, if the rest of the world manages to avoid the worst case scenario.

I do believe what the news media is calling an economic or financial armageddon is on its way. And the longer it waits to get started, the worse it will be. So I will leave you with this last video link, watch at your own risk. *4

^{*4} Financial Armageddon http://financearmageddon.blogspot.co.uk/2014/07/official-warning-u-s-to-hit-russia-with.html



An Intelligent Solution - to Pollution - From Beer

Everyone who has ever seen 'Happy Feet' knows the horrors of those plastic rings that hold cans together. But they are far worse in real life. Sea life really do get caught in those six-pack rings and eventually die, and then - after the plastic begins to break down the fish eat that plastic, they have a second chance to die from our garbage.

However some incredibly clever people at the Saltwater Brewery^{*1} in Delrey Beach FL in collaboration with We Believers out of NY, have come up with a solution that is a creative and sustainable alternative to the harmful plastic six-pace rings. They use their byproducts from brewing beer to make an edible bio-degradable replacement that doesn't harm the environment, and instead of killing animals - feeds them.

Now, if those rings end up in the lakes or oceans, the fish can safely eat them. This gets rid of one environmental threat, feeds the fish, and creates a supplemental income from what had been waste and a removal cost. Not bad guys, not bad at all.

Just one question, edible underwear was available back in the mid 1970s, why did it take 45 years to take such a dumb idea and do something intelligent with it? Hopefully it won't take another 45 years before we take the next step and start to make more things from products

^{*1} Saltwater Brewery http://www.saltwaterbrewery.com/community-swb/

that will break down into biodegradable food sources.

One other topic that is talked about a lot when discussing living at sea is the diversity and ease of growth of the various types of algae. Algae can be used to make oil and from that plastics. But when we are thinking about a one use disposable product, why not use algae to more directly make other substitutes for plastics - which would also be a good lunch for some poor hungry fish.

Bob Llewellyn / July 2016