

Climate Foundation Marine Permaculture Vision Featured in New Documentary *2040*

As Dr. Brian von Herzen, founder of the Climate Foundation, likes to point out: “the future is here, it’s just not widely distributed...yet!” In the spirit of this insight, Australian documentary filmmaker Damon Gameau (*That Sugar Film*) set out in his new documentary *2040*, to explore the possibilities for a green future on Planet Earth. The premise is simple: what would the year 2040 look like if humanity embraced the best solutions already available to us to improve our planet and rapidly shifted these into the mainstream.

“What if the green future we desire, became widely distributed?” Gameau’s quest to furnish a compelling answer that does justice to the scope of this question takes him around the world. Drawing on some of the world’s brightest minds to focus on climate, economics, technology, civil society and agriculture, *2040* maps out a pathway for change towards a sustainable and regenerative future. This hopeful journey into a desirable future, is told through encounters with the innovators and change makers already pioneering the best solutions available to us today, to improve the health of our planet and societies.

Gameau joins Brian von Herzen on a boat trip and a kelp forest dive, to learn about Climate Foundation’s plan to restore marine ecosystems through Marine Permaculture. Kelp forests are one of Earth’s most vibrant biomes and dynamic carbon sinks, drawing down more CO₂ from the atmosphere by area than land-based rainforests do. They comprise a major tool in the fight against ocean acidification, climate change and biomass loss and hold the potential to help reverse global warming. Not to mention, kelp forests are the habitat and foundation of the food chain for countless of the fish and crustaceans many of us eat.

Climate Foundations’ Marine Permaculture vision is two-fold:

- Warming ocean temperatures are presently undermining natural overturning circulation of nutrient-rich cold waters, which is causing kelp forests to be wiped out around the world. The Climate Foundation is working to restore this overturning circulation through wave- and solar-powered deep water pumps that sustain conditions conducive to forest growth. This technology is already being deployed in the Philippines, thereby restoring productivity to seaweed farms.
- Floating, open-ocean kelp ecosystems placed in the oceanic deserts around the world could sequester atmospheric carbon and attract and grow fish, filtering out their waste and recycling nutrients. The kelp could be harvested to be used as biofuel, fertilizer, livestock feed, superfood and countless biomass applications and high-value extract. After high-value extraction at sea in the harvester biorefinery, the kelp could be sunk to deep anoxic environments, locking 90% of the sequestered carbon away for millennia.

The large-scale regeneration and open-ocean cultivation of kelp forests will provide food, fuel and fertiliser for the 9 billion humans that are likely to inhabit the planet by 2040, while drawing down carbon dioxide from the atmosphere and leaving space on land for all those other uses. What more could you ask for? The future, now! The challenge, which *2040* aptly encapsulates, is to scale rapidly. The prospect of green oceans and happy humans is one that a growing number of kelp farmers in coastal regions are working towards. From Norway to Faroe Islands, from Maine to California and beyond, their vista is the same: verdant kelp forests and yummy seaweeds. The Climate Foundation’s two-part Marine Permaculture plan is pivotal however, to ensuring that the future is widely distributed, in time for the future.

The official trailer is being released on facebook and can be viewed at:
<https://www.youtube.com/watch?v=p-rTQ443akE&feature=youtu.be>