

The Paradise Index: An Invitation

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"We have met the enemy, and he is us." Walt Kelley

If someone were to tell you that your personal way of life was quietly and gradually being endangered, it's likely you would want to know why, how, and by whom. After all, in an age of global terrorism, it's important to know who and where your enemies are and how to keep your guard up. Imagine then, how you would feel if you were to discover that the person putting this future in danger is the person you see daily in the mirror.

Me? Yes, you, plus all of us here in Hawaii. Lost in working and getting through our days we forget about the larger picture that we are part of, the growing numbers of people wanting to live the good life and in the process putting at risk the Hawaii they hope to have for themselves and their children. Our way of life in Hawaii, after all, rests on a series of assumptions that, given recent evidence, may no longer hold true.

Paul Erhlich at Stanford put it succinctly when he said: Population x Affluence x Technology = Impact on Environment. Population: that's you and me, and our numbers are growing faster than you might think. . Affluence: that's our homes, our food, and our consumer habits. Technology: that's our cars, the airplanes that move us where we want to go, our household appliances and electronic gadgets,, and the technologies we use to sustain the good life. The net impact of $P \times A \times T = I$ is worth closer examination.

Examine, if you will, our prospects for the future compared against the assumptions underlying our present way of life statewide. What is the likelihood of continuing our high-end consumer way of life in what we call paradise? At what quality, for how many people, and for how long? Projecting out current growth patterns into Hawaii's future suggests that piece by piece, our present way of life cannot and will not continue at the same quality. Our island islands are small, their resources limited, and we already see multiple signs that our population is overtaxing the natural resources on which we depend. Identifying and establishing useful Sustainability Indicators may provide us a report card of how well we are ensuring our future, what needs immediate attention, and what kind of changes we need to make.

What follows is a first draft of The Paradise Index, a look at some of the Sustainability Indicators we need in order to measure the likelihood of supplying the needs of Hawaii's population. Think of them as a report card that Hawaii's society gives itself in order to do a better job with its work, resources, and talents. Why a Paradise Index? Because the focus on measurements such as the Gross State Product ignores any genuine progress. Concepts that once may have seemed extraordinary (e.g. Darwin's evolutionary theory, emancipating slaves, enfranchising women) now have become part of accepted belief, law, or part of the mores essential to a sustainable and just way of life in our society. Concepts essential for a sustainable world also now include: 1. the just and equitable treatment of human beings, and a reasonably good quality of life for all humans; 2. responsible consumerism; 3. corporate and individual behavior that provides measurable, sustainable impacts on local and global environments, preserving biodiversity. These concepts are to be measured via The Paradise Index.

The seven Indicators include Population, followed by the five-part Sustainability approach that the City and County of Honolulu has developed via the General Plan and visioning exercises with citizens: Economy; Energy; Land Use & Agriculture; Natural Resources; and Transportation. Think of each of these measurements as needed for a Genuine Progress Index, which is perhaps another useful way of seeing The Paradise Index, information we need if we want our children and their children to inherit the Hawaii they deserve. Finally, we have aggregated Social Capital Indicators such as Crime &

Incarceration, Education, Health, Income Distribution, Effectiveness of Government, Culture, Hawaiian Rights, Corporate Citizenship, and probably some new Indicators that identify problems and tell us if we are making progress in solving them. Each indicator will have several components to it, ! each of these assigned a priority as to its importance.

Each quarter we measure the Gross State Product, our total economic production as a line on a graph, and we measure tourism and employment figures as well. Sad to say, when these figures look good, they give us the illusion that we are doing fine. But the economic concept of growth hides the data we need for a much clearer look at our future. We need to imagine another, probably more valuable line on the same graph. This heavier line would be the Paradise Index, measuring in aggregate any genuine progress or losses we are experiencing in those sides of life that, though unmeasured, matter to all of us. The Paradise Index, then, is a look in the mirror, and a chance to hold ourselves and our public officials accountable for sustaining Hawaii as we want it and will need it for the future. Without such an Index, we will continue to stumble along relying on fragmented information to use making the decisions that will sustain! or overtax the Hawaii we want for the future.

POPULATION

Since statehood in 1959 the population of Hawaii has roughly doubled, presently reaching just over 1.2 million. According to the U.S. Census, Hawaii's statewide population grew 9.3% over the 1990's decade, a growth rate somewhat slower than the previous 50 years, which averaged a growth of 19% in population every ten years.

While the State Department of Business , Economic Development & Tourism projects a 4.5% population growth rate for the next 20 years, it supplies no explanation for a growth rate half that of the most recent decade. Sustaining population growth at 9.3% per decade would mean doubling Hawaii's population to 2.4 million in about 70 years. It is worth noting, however, that over the same 1990's decade, Oahu grew at a slower rate, 4.8%, suggesting (all things being equal) that on crowded Oahu, it would take roughly twice as long -- 140 years or so -- to double the number of people.

Population growth reflects far more than the urge to reproduce. It is also a function of food supply, available water, economic growth, demographics, education, culture, public health measures, the cost and availability of energy, economic diversification, globalization, war, changes in technology, climate change, and a host of other influences including what our culture senses as its limits. With the baby-boomer population bubble past its child-bearing years and approaching retirement, we might expect fewer births and more deaths, but perhaps we should also expect more retirees from overseas wanting to enjoy their final years in the islands. The US has approximately 88 people per square mile. In 1990 Hawaii had 188 per square mile, and Oahu 1460 per square mile. Hawaii presently serves roughly 7.4 million visitors a year.

Waikiki on a given day contains about 128,000 or more people in its square mile of land, including 22,000 residents, roughly 30,000 employees, and some 76,000 visitors on a given day (and room for 14,000 beach-goers, if each is provided a space 4' x 8' at low tide).

Honolulu, the 12th largest city in America, has more cars per mile of road than any place in the country, an estimated .67 mile of cars per 1.0 mile of road, or from another pint of view, 1.2 cars for every registered driver, and an annual net increase of thousands of vehicles on the most populous island. The population density of 12.31 per acre in urban Honolulu shows it to be almost 50% more crowded than the more densely populated parts of New York city or Chicago. Our number of persons per room in Honolulu dwellings shows much the same situation, surprising crowding, and urban sprawl onto the Ewa plain and across the isthmus of Maui reveal the spill of population pressures into

land use controversies.

Doubling Hawaii's population would mean: 2.4 million people in Hawaii, approximately 1.8 million of them on Oahu, 144 people per square mile statewide, 2880 people per square mile on Oahu, twice the number of cars (2million), twice the number of houses and apartments, and twice as much sewage. With sewage capacity already strained on Oahu, heavy rains in early 2004 sent sewage spilling onto beaches and into coastal waters, requiring the Health Department to close beaches for over a week in some places. 2.4 million people would also mean twice the trash, trash pickup trucks, drivers, and demand for landfill; Oahu already faces a struggle to identify a new landfill site or some other means of turning waste into energy. Imagine as well twice the number of airline arrivals and departures, tankers supplying twice the present demand for refined petroleum, and doubling the chances of a disastrous oil spill.

Hawaii would need to generate twice the electricity! , and that would mean either huge new fossil fuel power plants, or a new approach to distributed electrical production and renewable energy. Clearly population pressures and their resource demands mean making choices soon in order to avert problems that a more-of-the-same approach will bring us.

A doubled population would obviously also require twice the food. While Hawaiians historically sustained a large population quite well with local food, Hawaii presently spends about \$4.5 billion annually to import food for residents and visitors, and has about 35 days worth of food supplies in civilian storage. A doubled population would require twice as many schools and school rooms, and twice as many teachers, nurses, physicians, and police . . . and government budgets presumably twice those we presently support.

Honolulu currently uses some 150 to 175 million gallons a day of water, with demand rising as high as 180 mgd on hot summer days. Total water demand increases by some 1.14 mgd annually. The Honolulu Board of Water Supply estimates that at current consumption rates, and with somewhat improved rainfall patterns, we will be drawing on the maximum water available some time between 2018 and 2024. A doubled population means Oahu residents will face water shortages and water rationing, unless desalinated water or reclaimed sewage treated water can be used. The scale of our society has to acknowledge its natural resources and fit comfortably with its cultural requirements.

Unless the economy somehow diversifies, a doubled visitor industry would have to accommodate 14 million visitors, providing twice the number of hotel rooms with twice the number of hotel workers, rental cars, tour busses, restaurant seats, taxis, etc. Hawaii carries the dark reputation of being the endangered species capital of the America, and Science repeatedly shows us that Hawaii's natural resources, such as Hanauma Bay, have already reached and exceeded the limits of human activity they can sustain.

Population growth in Hawaii is the elephant in the room that most of us ignore or pretend we can't see. The elephant, however, already wonders where its next big meal will come from, who will clean up its growing pile of waste, and where it can find more room to grow.