



TRANSITIONING TO GREEN'S PERSONAL SUSTAINABILITY GUIDE

START HERE

What each of us does makes a difference to the sustainability of our world. Some simple changes we can make have real and beneficial effects. Areas of high impact are Food, Homes and Buildings, Transportation, Waste, and Carbon Footprint. This Guide gives you some context information and suggestions about where and how to start. None of us can do everything. Each of us can do something. This Guide offers inspiring ideas for things each of us can do in our everyday lives.

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Transitioning to Green's Personal Sustainability Guide

Personal choices and actions are both less important and **much more important** than people think they are. This Personal Sustainability Guide presents some ways you can make lifestyle changes – some small, some bigger – that will have a beneficial impact. We invite you to start here and join us on our shared sustainability journey.



What can you do at home, at work, or in your community to nurture nature and progress your well-being?

What we do and how we live every day can make a difference. If you or any one of us were alone in taking responsible actions to achieve a sustainable world, our individual efforts would amount to little more than one raindrop in the ocean. When our actions are combined with the actions of hundreds of thousands of other people making responsible choices and working toward sustainability day after day, week after week, month after month, together we can make a very big difference. This Guide offers some doable steps you can take.

Please share this guide with friends and family, with colleagues and organizations. Generate your own ideas and actions to reduce your personal footprints. Start discussions about topics you are passionate about and how you can use those to make commitments together to strengthen your resolve and scale your beneficial impacts. For those who wish to learn more, please visit www.tsefb.com where you can browse topic specific reference documents, additional topics and selected collaborative initiatives working to implement actions in hopes of improving or transforming current unsustainable systems and creating alternative pathways to a thriving future.

Transitioning to Green (TTG) also offers Workshops designed to introduce you to critically important yet challenging topics such as sustainability, systems thinking, or ecological footprints in only a few hours.

Food System Insights and Actions



West Stockbridge, MA Farmers Market

CONTEXT

If you are reading this, chances are you ate a meal within the past 12 hours. How did you get your food? Where did it come from? Do you know?

Chances are a significant portion of what you ate was grown or produced more than 100 miles from you. Maybe it was even grown in a different country. Access to food from around the world is a recent occurrence, starting less than 70 years ago. For many of us growing up, the fresh food we ate was both local and seasonal.

The US produces food in abundance. It is one of the largest producers of food in the world. Beginning in 1973, US government agricultural policies shifted from protecting family farms to incentivizing agribusiness monoculture (single crop planting on a very large scale) and overproduction of cash crops. Cattle, corn, and soybeans are the top three farm products. The US exports a large percent of these products and imports even more food products than it exports. Processing and distribution of much of the food that is sold within the US is concentrated in the hands of only 10 corporations. Close to 3% of US farmland is held by foreign investors. There are over 2 MM farms in the US. While 45% of farms are family owned, a little less than 10% of US farmers sell their products locally. Although we depend on food for our very lives, today we are mostly disconnected from how our food is grown and processed. Why does any of this matter for sustainability and why should you care?

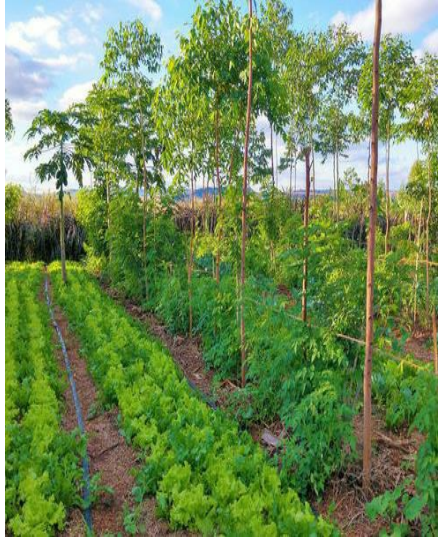
Intensive monoculture agriculture and cattle ranching has increased the amount of food the US produces, but at a heavy cost to the environment and an increasing hit to social justice - millions of food workers cannot afford to eat the food they produce. In addition, this food-growing process is highly dependent on the heavy application of fertilizer, pesticides, and prophylactic antibiotics all of which harm the health of farm workers and the environment (soil, water and pollinating insects and birds).

The agricultural sector is assessed to contribute 11% of the global CO₂ emissions but that's misleading. 31% of the human contributed Greenhouse Gas (GHG) comes from the global agri-food system. It's not only the actual growing process but the fertilizer, pesticides, transportation, clear cutting forests, uber-tilling that contributes that much and probably more to GHGs and climate change.

What difference can any of us make?

PERSONAL CHOICES AND ACTIONS

Prioritizing sustainability in buying your food. It's good for YOU and good for the environment. Sustainable farming:



- Improves health of soils (= healthier plants and animals and higher nutritional content of food = **healthier people**)
- **Promotes biodiversity, companion planting,** and biome appropriate farming such as forest farming or agroforestry (picture from goodnet.org). This means less stress on the plants and animals which makes it *healthier for them and for us*
- Reduces environmental (soil, water and air) pollution by decreasing pesticide and fertilizer use, and **encourages regenerative farming**

- Shop **Farmers Markets** whenever you can. Look for ones that feature food producers located within a 100-mile radius of the market. Ask. They'll tell you.
- **Buy Community Supported Agriculture (CSA)** shares sold by small-scale farmers during the growing and harvest seasons. Get to know the people who grow your food and support their work.
- Look for **Low Food Miles** products - food that comes to you with minimal transportation (for instance, some apples from Washington State are shipped to Asia for packaging then shipped back to the US for sale). Learn what foods are grown and processed within 100 miles of where you live, within 200 miles, and so on.
- **Grow and eat organic, sustainably grown or biodynamic (holistically sustainable) vegetables and fruits, free range chicken and meat (See text box).**
- **Eat/buy wild caught fish** - But not fish that are bottom-dragging trawler or factory ship caught - those scrub everything off the sea bottom, and scoop up whatever enters their huge nets, not only the preferred edible species, as these deplete large swaths of sea ecosystems, leaving a lifeless void behind.
- **Increase vegetables and fruits eaten** - especially fresh ones - while reducing meat consumption. It's good for your health, and growing vegetables has a lower overall environmental impact than raising meat.



Example: Salad in a Container

What you need:

- Container of at least 15-gallon size with drain holes in the bottom, or a stackable or large strawberry planting pot with side pockets for plants
- tomato cage or stake and ties. Maybe bird netting to cover if you have squirrels, rabbits, or woodchucks
- Organic soil

Ring planting a salad garden:

- Cherry or Grape tomato plant in the middle
- 3 or 4 leaf lettuce plants surround the tomato (you can pick the outer leaves and the inner ones will keep growing)
- 2 chive plants alternating with 2 basil plants next outside the lettuce
- 3 or 4 nasturtium plants on the outside (nasturtiums are edible flowers that taste like mild cucumber)

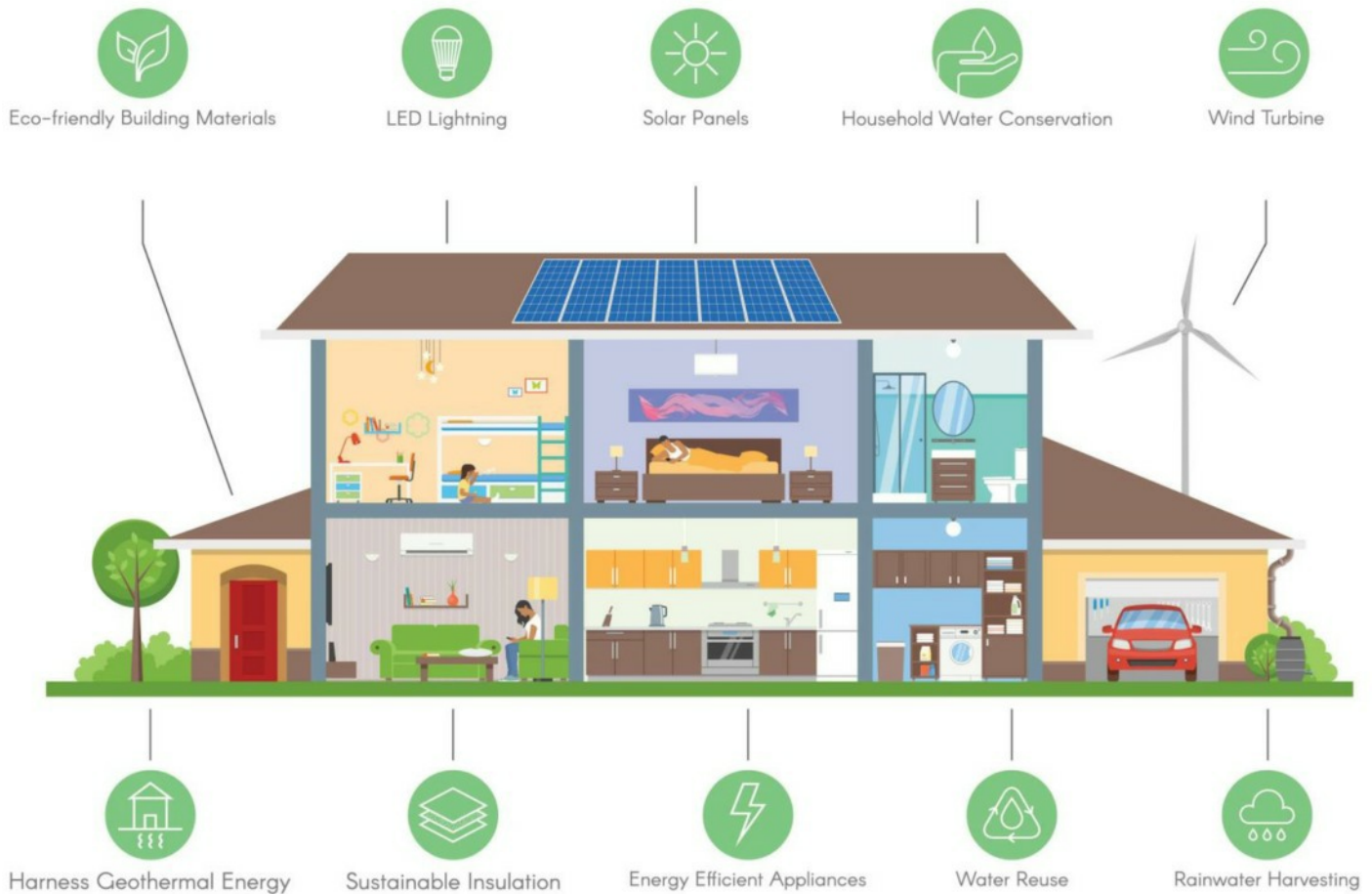
Homes and Buildings Insights and Actions

CONTEXT

According to the World Business Council for Sustainable Development, a sustainable built environment is **circular, designed for longevity, flexibility, adaptability, assembly, disassembly, reuse and recoverability, and considers future climate risks**. It uses low-carbon, low-impact, non-toxic materials and it recovers used resources (materials and products on-site or from other sites). Forest land needs to be conserved and regenerated as it currently provides 42% of the world's total biocapacity (nature's gift to us of fuel and food plus absorbing waste). Urban buildings and infrastructure will be particularly important as 70-80% of the world's population is expected to live in cities by 2050. Smart land use choices, urban planning and development strategies are crucial to managing our resources.



A sustainable home is **an efficient home that's built or retrofitted in a way that respects resources, optimizes energy and water use, and will last longer with quality systems**. Sustainable homes use low-impact, high-performance materials. They're efficient in terms of manufacturing, shipping and installing.



<https://blog.anchorhomes.com.au/how-to-build-a-sustainable-and-eco-friendly-modular-home>

PERSONAL CHOICES AND ACTIONS

Lighting, HVAC and Energy –

- In summer, **open the windows in the early morning** to let in cool air. Close them when sunny.
- **Use shades and curtains** on south and west facing windows to block summer afternoon sun to reduce the need for air conditioning.
- **Lower your thermostat** in winter and raise it in summer. Use less air conditioning in the summer; instead opt for fans, which require less electricity.
- **Switch lights off** when you leave the room and **unplug** your electronic devices when they are not in use.
- **Change incandescent light bulbs** (which waste 90 percent of their energy as heat) to light emitting diodes (LEDs). Though LEDs cost more, they use a quarter of the energy and last up to 25 times longer.

Water and Landscaping –

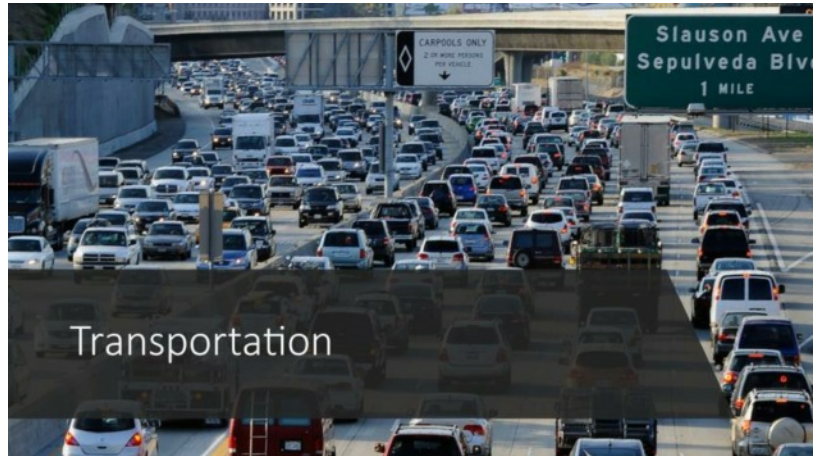
- **Turn off the faucet when brushing your teeth** - wet your toothbrush, turn off the water while brushing, turn on the water to rinse your mouth and brush. Also turn off the water when washing dishes by hand, and on to rinse.
- **Reduce green lawns and make more gardens:** use primarily plants native to your area --e.g., in northeast US use frost tolerant plants, in southwest US use plants that require little water.

Transportation System Insights and Actions

CONTEXT

Sustainable Transportation refers to **any means of transportation that is 'green' and has low impact on the environment**. Sustainable transportation is also about balancing our current and future needs. Examples of sustainable transportation include walking, cycling, transit, carpooling, car sharing, and green vehicles.

City planning can play a major role in shaping our need for cars. It matters because personal mobility makes up 17% of humanity's Carbon Footprint (see p. 11). Emissions produced by transport are not only irreversible in warming the planet, they are also one of the main **causes of air pollution**. The latter is a terrible environmental problem, affecting our health much more than we think; it causes around 7 million deaths a year worldwide.



Kindel Media

Our unsustainability, when moving about our communities is becoming more and more difficult to justify. The range of alternatives being employed in many cities is ever greater, from **clean public transport** to all kinds of **electric vehicle sharing** systems that do not emit any pollutants locally.

Can you take transit, bicycle, or walk instead of driving solo at least once a month? Once a week?

PERSONAL CHOICES AND ACTIONS

Cars - Failing to adequately reduce gasoline vehicle emissions burdens the atmosphere with increased excess carbon dioxide (CO₂) for many years ahead. Every gallon of gas burned emits around 24 pounds of carbon dioxide.

- **Inflate your tires:** Properly inflated tires can save you up to 5% in fuel consumption. In addition, your tires wear out less quickly.
- **Stop idling, turn off motor when waiting:** Idling for more than 10 seconds uses more fuel and produces more emissions that contribute to smog and climate change than stopping and restarting your engine.
- **Buy a more fuel-efficient car:** Owning a fuel-efficient vehicle has become of greater importance in today's world, where gas prices are rising and GHG emissions must be avoided. Thinking of fuel economy in terms of gpm can help car shoppers make more economically sound decisions. Trucks and SUVs shifting from 12 to 20 mpg can make a bigger difference than trading a mid-sized sedan for a hybrid.
- **Buy an electric vehicle:** When the electricity comes from renewable sources, all-electric vehicles produce zero emissions to drive. Innovative battery technologies are coming to transform EV performance and lower environmental impacts.

Air Travel - Even though aviation is not a large industry, it is growing fast as travelers appreciate saving time, but it has a large impact on the climate system. We don't advocate giving up flying altogether, but you can fly less and fly smarter.

- **Take Staycations** - When vacationing closer-to-home, there are many opportunities to replace air travel with more sustainable modes of transportation.
- **Fly Smarter** -
 - Book non-stop flights. Non-stops take the most direct route to the destination saving fuel.
 - Fly economy. Air passenger's emissions are determined by the amount of space they take up on the plane. On average, business class seats are two times larger than those in economy.
 - Pack your bags as light as possible to reduce fuel use and thus carbon emissions. Lightening your luggage by 15 pounds decreases emissions on a ten hour flight by about 80 pounds.

Mass Transit - Public transportation inherently benefits the environment because it reduces the number of people traveling in single occupancy vehicles. By increasing ridership on public transit, more fuel is conserved, air pollution decreases, and the region's carbon footprint is reduced. In the U.S., public transportation saves 37 million tons of carbon emissions every year.

- **Eliminating one car** and taking public transportation can potentially reduce household carbon footprints by 30%.
- **While traveling** - Instead of hiring a driver or renting a car, be adventurous and opt for public transportation. Ride the subway. Hop on a bus. Spend the day exploring by bicycle or on foot.

Walk or Bike - Switching to walking or cycling for more of our shorter journeys helps to protect biodiversity. It creates less noise, less air pollution, and results in fewer emissions that are warming the atmosphere.

- Walking and biking **health benefits** include lowering blood pressure, reducing depression, and even preventing some cancers.
- Sharing bicycles and electric scooters reduces downtown automobile traffic. Amsterdam launched its **shared bicycle service** in 1965. Today many places have introduced this service as part of their sustainable mobility plans.
- Electric bike models and conversion retrofits are also streaming onto the market making the bicycle a perfectly viable sustainable transport alternative for short and medium distances.

Waste Insights and Actions



New York is America's Waste Capital Trash Town, and what can be done about it

CONTEXT

If observers from outer space were asked to describe what humanity is good at doing in a single sentence, the odds-on favorite would be “Humans excel at generating waste!” Humanity’s huge garbage dumps are not only clearly visible but also a major source of leaking methane. We have become experts at wasting in great measure all the resources Mother Nature provides.

We live on a finite planet of finite resources. This practice of extreme waste generation is dangerously unsustainable. The US is the world’s largest waster, generating the highest amount per capita. With only 4% of the world’s population, the US produces almost 12% of the world’s municipal solid waste (MSW). In 2018, it was 292.4 million tons. Most of that ends up either in landfills or incinerated. We can’t transition to a circular economy fast enough.

The 7 largest waste categories (epa.gov, 2018) by percent could be reduced, reused and recycled but mostly are not: paper and paperboard (23.05%), food (21.59%), metals (8.76%), plastics (12.20%), yard trimmings (12.11%), wood (6.19%), and textiles (5.83%).

What do you personally do with these materials when you are finished using them? Do you toss them out? Re-purpose them? Or recycle them? Rethink what you could be doing to do better. The US can shed our “Greatest Waster” label. Individual choices do matter.



PERSONAL CHOICES AND ACTIONS

Food – Over 40% of food produced is wasted. If we cut food waste in half worldwide, we would #MoveTheDate of Earth Overshoot Day forward by 11 days. Overshoot Day is the date each year by which we have consumed more of Earth's resources than nature can regenerate within the year. When first calculated in 1971, that day was December 25. In 2021, that day was July 29. This means that currently we consume (use and/or waste) a whole year's worth of Earth's natural resources within the first 7 months of the year. We are living way beyond our means and that's clearly unsustainable.

- Compost your food waste -- at home or by contract with a composting company
- Use all the food you buy – plan ahead with recipes and buy to fit them
- Freeze leftovers to use at a later meal

Packaging – Most packaging is either plastic or paper based

- bring your own reusable bags
- Buy fresh fruits and vegetables without packaging (and refrigerate using the bins but don't wash until ready to use)
- Recycle the packaging you cannot avoid getting

Clothing – Yes, we need clothing. But how much do we need? Are we throwing away instead of repairing or reusing? Getting creative about clothing is a good way to increase sustainability. All children are creative. Adults can re-find exercise creativity to be more sustainable – it's fun plus it's one of the best ways to reduce stress.

- Buy clothes to last, not to wear for a season and toss
- Mending – the practice and art of clothing repair
 - Boro and Sashiko
 - Darning
 - Patching
- Upcycling - make something new from your old clothes
- Buy from companies that buy back – e.g., Patagonia, Eileen Fisher, The North Face, Arc'teryx, A.P.C., Levi's
- Buy thrift, renewed or vintage clothes
- Buy sustainably sourced clothes. Search for apps such as Good On You that rate clothes for sustainability in production.
- Creative outfitting – shop in your own closet and try new mixes and matches. Want help? Search for a variety of phone apps

Water -- reduce your use.

- Run your clothes washer full. Half-filled or filled uses almost the same amount of water
- Save cooking water to use on inside and outdoor plants
- Modify or retrofit your toilet tank to reduce water use -- bend the float rod downward so that the float ball stops with less water in the tank, or put in a toilet tank displacement bag or bottle to reduce the space that water can fill

Carbon Footprint Insights and Actions

CONTEXT

Carbon Footprint is a measure of carbon compound gases, particularly carbon dioxide (CO₂) and methane (CH₄), that natural and human-made activities emit into Earth's atmosphere. These are called greenhouse gases (GHGs) because they trap heat within the atmosphere. Start by thinking of this like the blanket on your bed. Your blanket traps your body heat underneath, keeping you warm. When you are warm enough, you can easily move your blanket to cool off so you don't overheat. While acting as a blanket, GHGs are not a solid cloth. They're separate molecules suspended in the atmosphere that block heat from the Earth from leaving the atmosphere. The more GHGs thrown up the thicker the layers get, trapping more and more heat. What would happen if your blanket got heavier and you couldn't take it off even though your room got hotter and hotter? It could be deadly to you. That is what's happening now in our atmosphere. Eventually these carbon molecules break apart and no longer trap heat. The problem is that process takes hundreds of years or more - hundreds of years of overheating.

Climate scientists monitor and research GHGs and their consequences to us and other life on Earth. One consequence is increased weather extremes all around the world. The more heated the atmosphere, land and oceans, the more extreme the weather events. A major report by the UN's Intergovernmental Panel on Climate Change (IPCC) published in March, 2023 has warned us that human activity is changing the climate in unprecedented ways. Extreme weather events (below) were rare in our past. Now we suffer these disasters every year all across the world. Millions of us have already suffered the effects. We could stop doing things that contribute the most to increased GHGs. We could transition from those actions to responsible, sustainable processes. The choice is ours to make, to change or continue down the current unsustainable, dangerous path.



Reducing your carbon footprint is a practical and immediate way to make responsible choices regarding your personal contribution to climate change. While one person may not make a difference, collectively we really do.



<https://co2living.com/reduce-your-carbon-footprint-7-instant-ways/>

PERSONAL CHOICES AND ACTIONS

Food Emissions Savings – It has been estimated that **13%** of U.S. greenhouse gas emissions result from the production and transport of food, but as we said, it is higher when we look at the full food system value chain.

- **Eat locally-produced and organic food:** Transporting food requires petroleum-based fuels, and many fertilizers are also fossil fuel-based.
- **Reduce eating meat and dairy:** Meat production requires the consumption of a lot of resources – land, water, and energy. For example, beef is a high-carbon meat. Vast swaths of what used to be tropical rainforest that stored carbon in long-lived trees are clear cut, drying those areas, making them more fire-prone and no longer able to store carbon. 80% of Amazon deforestation is for cattle grazing which accounts for more than 1/5 of the global beef exports. These deforested lands become carbon emitters, accounting for almost 5% of the global CO₂.

Home Energy Emissions Savings – Residential energy use accounts for roughly **20%** of greenhouse gas (GHG) emissions in the United States.

- Installing a **low-flow showerhead** to reduce hot water use can save 350 pounds of CO₂. Taking shorter showers helps, too.
- **Turn your water heater down** to 120 °F. This can save about 550 pounds of CO₂ a year.
- **Wrap your pipes:** The use of insulation for hot water pipes has reduced the heat loss from the bare pipe, on average, by 95%. This reduction in fuel usage translates to a reduction in CO₂ emissions, a savings of 2,309 pounds of CO₂ per year.
- **Energy procurement:** Sign up to get your electricity from **clean energy** through your local utility or a certified renewable energy provider.
- **Install solar panels:** A residential solar panel system, for example, has the capability of providing for the electricity needs of an entire home with about 80% lower carbon emissions than fossil fuels.

Transportation Emissions Savings – The US transportation sector—which includes cars, trucks, planes, trains, ships, and freight—produces nearly thirty percent of all US global warming emissions, more than almost any other sector.

- **Drive less:** When possible, walk or ride your bike in order to avoid carbon emissions completely. Carpooling and public transportation drastically reduce CO₂ emissions by spreading them out over many riders.
- **Fly less:** Taking just one flight can produce more emissions than some people produce in an entire year. A round-trip flight from Chicago to London produces roughly 2.2 metric tons of CO₂ per passenger.

Waste Emissions Savings -

- **Produce less garbage** - Solid waste contributes directly to greenhouse gas emissions through the generation of methane from the anaerobic decay of waste in landfills, and the emission of nitrous oxide from our solid waste combustion facilities. Project Drawdown estimates that recycling between 2020 and 2050 will reduce emissions by **5.5-6.02 gigatons of carbon dioxide** (equivalent to taking over 1 billion cars off the streets for one year).
- Join the **Circular economy** - By adopting the principles of the circular economy – eliminate waste and pollution, circulate products and materials, and regenerate nature – we can reduce our personal consumption emissions associated with industry, agriculture, and land use by 45%.

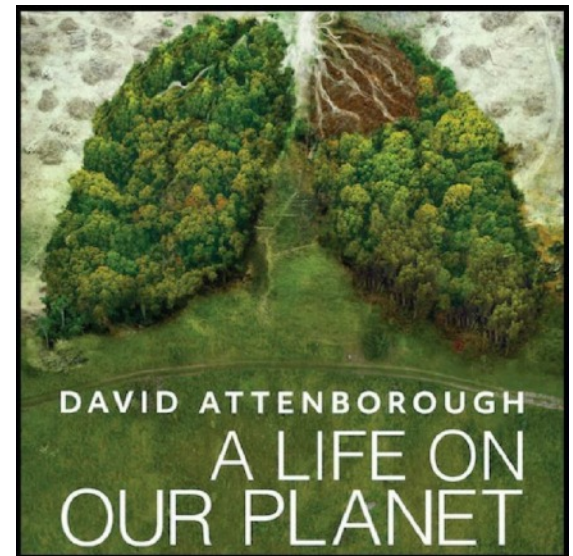
Documentary Movie Recommendations

(For the Couch Potato Activists)

The following movies are readily available on different platforms, and some are currently available on Netflix, some on YouTube. Each uses a compelling mix of video and narrative to not only convey the profound importance of its chosen topic, but to instill a visceral understanding that current practices and trends must be urgently transformed to avoid knowable crisis outcomes. While each conveys complex and at times overwhelming challenges and negative historical trends, each also provides alternative ideas for our future that allow us all to remain hopeful and continue our important work and continue our sustainability journey with optimism.

1. David Attenborough: A Life On Our Planet:

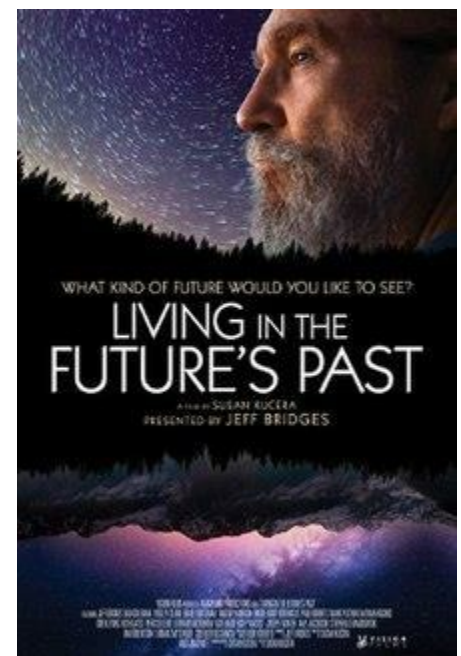
In this unique feature documentary, titled David Attenborough: A Life On Our Planet, the celebrated naturalist reflects upon both the defining moments of his lifetime and the devastating changes he has seen. Available on Netflix since 2020, the film addresses some of the biggest challenges facing life on our planet, providing a snapshot of global nature loss in a single lifetime. With it comes a powerful message of hope for future generations as Attenborough reveals the solutions to help save our planet from disaster.



2. Living in the Future's Past

“In this beautifully photographed tour de force of original thinking, Academy Award™ winner, Jeff Bridges shares the screen with scientists, profound thinkers and a dazzling array of Earth’s living creatures to reveal eye-opening concepts about ourselves and our past, providing fresh insights into our subconscious motivations and their unintended consequences. Energy is the currency of life. Bridges reveals the keys we need to move into the future wisely.”

Director: Susan Kucera. Produced by Jeff Bridges. Year of production: 2018.



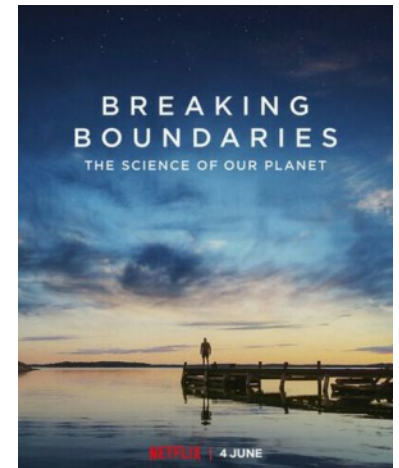
3. Mission Blue

Led by legendary oceanographer Dr. Sylvia Earle, Mission Blue is uniting a global coalition to inspire an upwelling of public awareness, access and support for a worldwide network of marine protected areas – Hope Spots. Mission Blue also embarks on regular oceanic expeditions that shed light on these vital ecosystems and build support for their protection. Currently, the Mission Blue alliance includes more than 200 respected ocean conservation groups and like-minded organizations, from large multinational companies to individual scientific teams doing important research.



4. Breaking Boundaries: The Science Of Our Planet

Breaking Boundaries tells the story of the most important scientific discovery of our time - that humanity has pushed Earth beyond the boundaries that have kept Earth stable for 10,000 years, since the dawn of civilization. The 75-minute film takes the audience on a journey of discovery of planetary thresholds we must not exceed, not just for the stability of our planet, but for the future of humanity. It offers up the solutions we can and must put in place now if we are to protect Earth's life support systems.



With these ideas and examples to whet your appetite and pique your interest, we invite you to learn more. Learn by doing. Read more. Try things out. Get engaged. It will energize your passions to make a difference. Action begets action, by yourself, with partners, as part of a community. As you develop new habits of sustainability those ways of doing everyday things will become a driving force for becoming more and more sustainable.

Please do share this Guide with anyone and everyone who is looking for what they can do personally to be more sustainable. Thank you.