

THE JACK H. BROWN COLLEGE, CSUSB, PRESENTS:  
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## "SUSTAINABILITY"

JHBC PRME MEMBERSHIP SINCE 2012

### THE MEANING OF SUSTAINABILITY:

The term **sustainability** comes from the Latin *sustinere* (*tenere*, to hold; *sub*, under). The word has become a term that is **ubiquitous** in modern life—and we assume that we know all there is to know about it—but what does it actually mean? One definition that is in common usage is from the United Nations' Brundtland Commission Report: "**Sustainability** focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs." <sup>1</sup> The concept



of sustainability is composed of three pillars: economic, environmental, and social—also known informally as profits, planet, and people. Sustainability is a model for thinking about Ecology, Environment and Economics in a balanced way, so that a good life is available to all people in the form of a healthy environment, social prosperity, and conscientious economic growth, that does not harm the environment and people. The 2005 World Summit on Social Development identified sustainable development goals, such as economic development, social development, and environmental protection.<sup>2</sup> **Global Warming** refers only to the Earth's rising surface temperature, **Climate Change** includes warming, and the "side effects" of warming—like melting glaciers, heavier rainstorms, and more frequent drought. Scientists and laymen alike have clearly observed these effects.

### EFFORTS OF THE GLOBAL COMMUNITY:

The United Nations has been deeply concerned about climate change for decades. In 1992, at its Rio Convention The UN's International Meeting in 1992, in Rio, known as 'Rio Convention' the UN's Framework on Climate Change, was envisioned. The UN set the *Intergovernmental Panel on Climate Change (IPCC)*. A framework for action was developed aimed at stabilizing atmospheric concentrations of greenhouse gases to avoid "*dangerous anthropogenic interference with the climate system.*"

<sup>1</sup> The Brundtland Commission Report, United Nations, 1987.

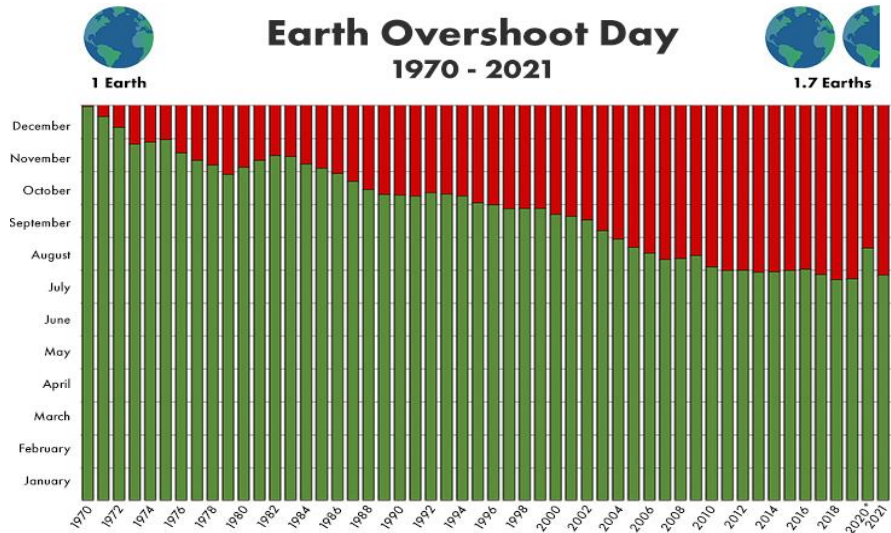
<sup>2</sup> United Nations General Assembly (2005). "*2005 World Summit Outcome*", Resolution A/60/1, adopted by the General Assembly, 15 September 2005.



The U.N. and 197 countries further strengthened concerns about climate change with its **Paris Agreement in 2015**. This agreement requires economic and social transformation in nations to be based on science. The agreement is considered a “treaty” under international law, but only certain provisions are legally binding. It specifically aims to keep a global temperature rise for this century well below 2 degrees Celsius, with the goal of driving efforts to limit the temperature rise to *1.5 degrees Celsius*.

## HOW DID WE GET HERE?

We got here with a simple issue, Supply & Demand. On the SUPPLY side we have only 1 earth, but on the DEMAND side we live as if we have 1.7 earths, and this usage is increasing. Every year we dip into our capital assets earlier in time. In 2021, August was the Earth’s “Overshoot Day.” After which we must borrow from the next year.



## THE EARTH’S CARRYING CAPACITY:

EXCESSIVE DEMAND LIMITS THE EARTH'S CARRYING CAPACITY

### Carrying Capacity

- Carrying capacity is the size of the population that can be maintained over a long period of time in an ecosystem.
- Carrying capacity is limited by resources such as food and water.

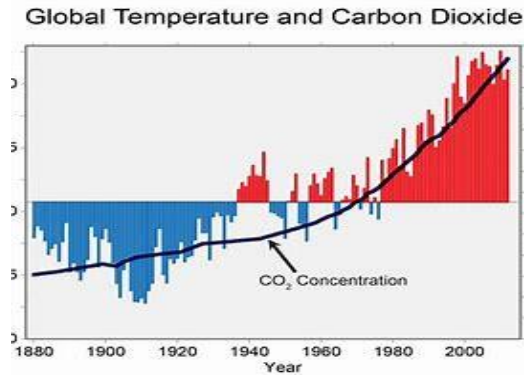
Carrying Capacity is Related to Population Growth

**Consequences of exceeding  $K$ .**  $K$  is the carrying capacity of the local environment

Figure 26-4b Biology: Life on Earth 8/e © 2008 Pearson Prentice Hall, Inc.

Dreamstime

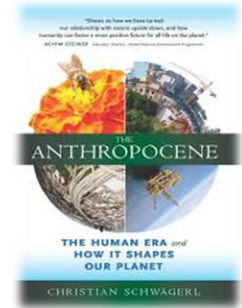
**A GLOBAL EMERGENCY SITUATION:**



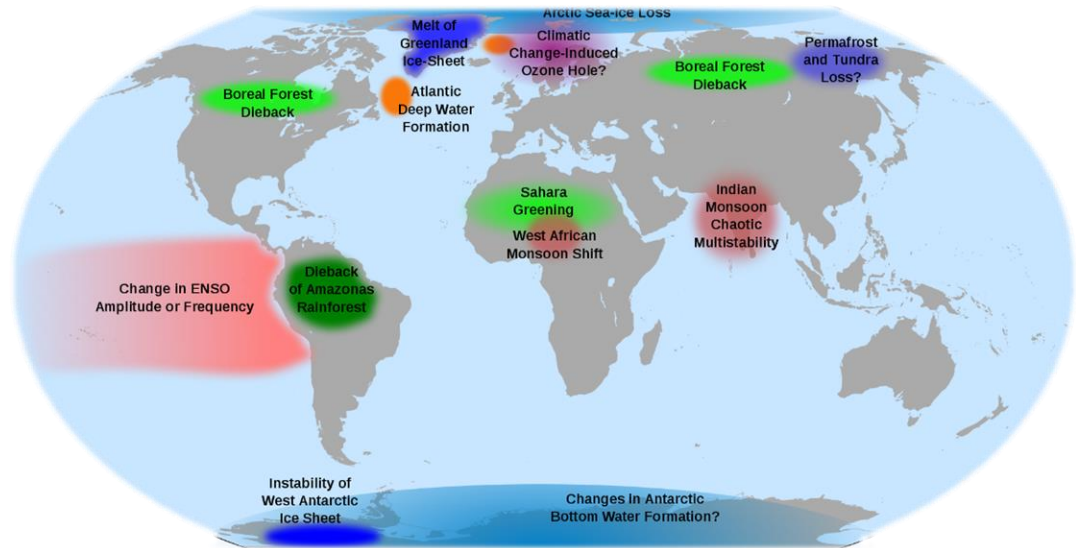
The Supply-Demand issue has led to many scientific studies. In a study called: World Scientists’ Warning of a Climate Emergency 2021, we are cautioned about “*untold suffering*” and a “*climate emergency*.” The document was endorsed by more than 11,000 scientist-signatories from 153 countries.”<sup>3</sup> *The study showed how near the* global Tipping Point, our planet has come. The UN has estimated this point to come in 2030.

**SCIENTISTIS CALL THIS ERA THE ANTHROPOCENE**

Human beings have so altered the planet in just the past century or two that we've ushered in a new epoch that environmental and other scientists call the “*Anthropocene*” The word Anthropocene is derived from the Greek words *anthropo*, (“*man*,”), & *cene* (“*new*”) The word was coined and made popular by atmospheric chemist Paul J. Crutzen, and liminologist Eugene Stormer 2000. (Source: Kolbert, 2019, *Nat. Geographic*.)

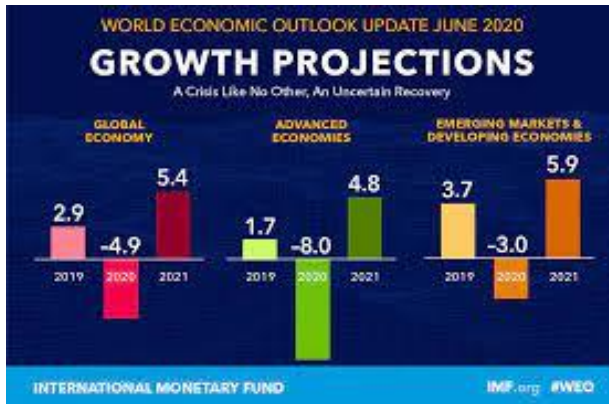


**THE PLANETARY TIPPING POINTS;**



<sup>3</sup> Ripple, W., et.al., (2021) *BioScience*, Volume 71, Issue 9, September 2021, Pages 894–898, <https://doi.org/10.1093/biosci/biab079>)

## AN ALARMING PARADOX:



Despite fears, about economic shortages it is known that global GDP has grown—*paradoxically along with pollution growth*. The growth of global GDP although modest, gives hope that there are economic resources to limit climate change. The global community needs to come together, with wealthier nations taking the lead for climate control.

## WORLD COMMUNITY RESPONSE:

At the UN’s International Meeting in 1992, in Rio, known as ‘Rio Convention’ the adoption of the UN’s Framework on Climate Change, came about in the form of the **Intergovernmental Panel on Climate Change (IPCC)**. This body laid out a framework for action aimed at stabilizing atmospheric concentrations of greenhouse gases to avoid “*dangerous anthropogenic interference with the climate system.*” Some political response to climate change now began to dribble out.



The U.N., strengthened its concerns about climate change with its **Paris Agreement** in 2015. It requires *economic and social transformation* in nations, based on



- China (9,300 Mt)
- The United States (4,800 Mt)
- India (2,200 Mt)

science. The agreement is considered a “**treaty**” under international law, but only certain provisions are legally binding. The Paris Agreement specifically aims to keep a global temperature rise for this century well below 2

degrees Celsius, with the goal of driving efforts to limit the temperature rise to **1.5 degrees Celsius**. At the Paris talks in 2015, the United Nations set up its agenda

for climate action with nations, in the form of **17 Sustainable Development Goals**. Nearly every nation on earth (197 nation states) endorsed the Paris Agreement.

However, in the next round of talks in Glasgow Scotland, the main offenders—China, the U.S. and India—are reputed to be still polluting, with coal, with limited, or no reduction.

**IN THE MEANTIME, AT CSUSB PROGRESS IS BEING MADE:**

STARS—The Sustainability Tracking, Assessment and Reporting System (STARS) was awarded to Cal State San Bernardino at the STARS **silver rating**, level, in recognition of its sustainability achievements, from the Association for the Advancement of Sustainability in Higher Education (AASHE). STARS, which measures and encourages sustainability in all aspects of higher education (7/6/2021). This effort has been actuated by many CSUSB dedicated citizens: The CSUSB Administration, The Sustainability Office, the interface between the campus Sustainability Committee and JHBC on Sustainability emphasizing PRME values, and CSUSB’s core objectives and many others, too numerous to mention here.



SUSTAINABILITY IN ACTION  
CSUSB’S CENTER FOR  
GLOBAL INNOVATION IS  
THE NEWEST FULLY-  
SUSTAINABLE BUILDING  
ON THE CAMPUS

**THE INTENT OF JHBC MAGALOGUES:**

This is the first of the JHBC/CSUSB/ UNPRME magalogues on Sustainability. These magalogues will be published periodically to keep the topic of sustainability alive in the minds of stakeholders. Each magalogue will in succession develop and explain one of the **17 UN Sustainable Development Goals (SDGs)**. This introductory magalogue has focused on Goal # 13—Climate Change. We do this to remind ourselves, friends and associates that we are nearing the **Global Tipping Point**. The Magalogues will supplement the Biannual **PRME BULLETINS** and the Biennial **PRME STATUS-IN-PROGRESS REPORTS**.



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