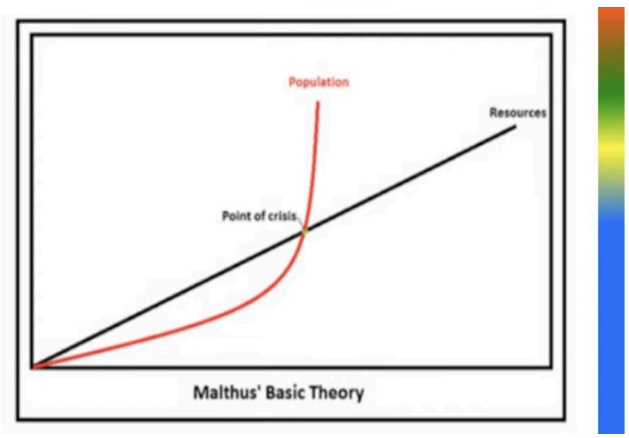
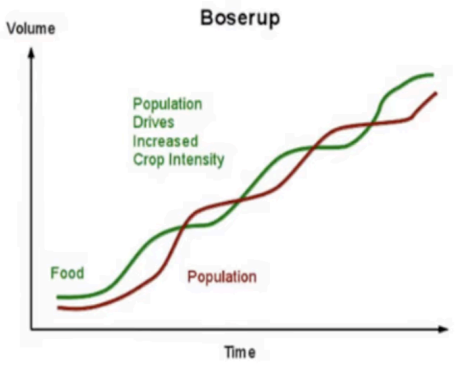
Divergent Thinking About Population and Resource Consumption

Understanding the relationship between **population growth** and **resources** is central to IB Geography. As the global population passes 8.1 billion and ecological footprints rise unevenly, different thinkers have offered contrasting explanations about whether humanity is heading toward scarcity or can innovate its way into abundance. These views fall broadly into three categories: **pessimistic (neo-Malthusian)** views, **optimistic (Boserup/cornucopian)** views, and **balanced stewardship-focused** perspectives. Each shapes modern debates around sustainability, overconsumption, fertility decline, and global inequalities in resource use.





Pessimistic Views: The Malthusian Perspective

The roots of pessimistic thinking can be traced back to Thomas Malthus, an English economist who wrote in 1798. Malthus argued that **population grows exponentially** while **food production increases only arithmetically**, meaning that population would eventually outstrip resources. According to him, famine, disease, and conflict would act as natural "checks" to bring population back within ecological limits. In a world with rapid population growth, falling death rates, and rising birth rates (as seen in many LICs during the mid-20th century), Malthus' theory appeared convincing.

Modern neo-Malthusians argue that these limits still apply, particularly when considering **ecological footprints**, climate change, and the global overshoot of renewable resources. Today, the **Earth Overshoot Day**—the day humanity uses more resources than Earth can regenerate in a year—now falls in **late July**, showing how consumption outpaces sustainability. Such data reinforces concerns that the

combination of population growth, rising meat consumption, water stress, and energy demand will exceed planetary boundaries.

One of the most influential neo-Malthusians is **Paul Ehrlich**, author of *The Population Bomb* (1968). Ehrlich predicted mass famine and conflict due to overpopulation. Although many of his predicted dates were inaccurate, his ideas significantly contributed to shaping environmental movements and the concept of **limits to growth**. The **Club of Rome's 1972 report**, *Limits to Growth*, used computer modelling to show that if unchecked economic and population growth continued, global systems would collapse within the 21st century. The model emphasised resource depletion, pollution, and declining agricultural yields—ideas still echoed in modern sustainability debates.

Real-World Malthusian Examples

Some regions show clear signs of Malthusian pressures today:

- **Sahel Region (e.g., Niger)**: Extremely high fertility rates (Niger still averages around **6.7 children per woman**) are combined with low agricultural productivity and climate stress. Desertification, food insecurity, and conflict over pastureland resemble Malthus' idea of "positive checks."
- **Horn of Africa (Somalia, Ethiopia)**: Recurrent droughts, rising populations, and insufficient food production have produced famine risk, showing how environmental limits can interact with population pressures.
- **Gaza and Yemen**: Rapid population growth, resource scarcity (especially water), and political instability reinforce neo-Malthusian arguments about the connections between scarcity and conflict.

These examples support the pessimistic argument that resource limits still matter, especially in regions with high fertility and fragile environments.

Optimistic Views: Boserup and Cornucopians

In contrast, **Esther Boserup** offered a very different view. Writing in the 1960s, Boserup argued that **population pressure stimulates innovation**. When populations grow, societies develop new technologies—irrigation, fertilizers, crop varieties—and increase productivity. Instead of causing collapse, population growth becomes a driver of agricultural and technological progress.

Modern cornucopian thinkers, such as **Julian Simon**, extend Boserup's optimism even further. Simon argued that **human ingenuity is the "ultimate resource"**, meaning that more people create more innovation. He famously won a bet against Ehrlich in 1990, predicting that key metals (tin, chromium, nickel, tungsten, and

copper) would become cheaper due to technological innovation and substitution. Simon was right: despite higher demand, the prices fell.

Real-World Cornucopian Evidence

Several modern developments support optimistic views:

- **India's Green Revolution**: Between the 1960s and 1990s, new high-yield seeds, fertilizers, irrigation, and mechanization dramatically increased food production. India went from food-deficit to self-sufficient—supporting Boserup's idea that pressure drives innovation.
- **Global food supply per capita has risen**, not fallen. Despite population growth, global food production today is **25–30% higher per person** than in the 1960s.
- **Renewable energy innovation**: Solar and wind power are now cheaper than coal in most countries, suggesting technology can reduce resource scarcity.
- **Falling global fertility rates**: The global fertility rate has dropped to around **2.3**, and 70+ countries are now below replacement level. This contradicts the idea of endless exponential population growth.

Cornucopians argue that these examples show humanity's ability to adapt, innovate, and expand resource capacity faster than population grows.

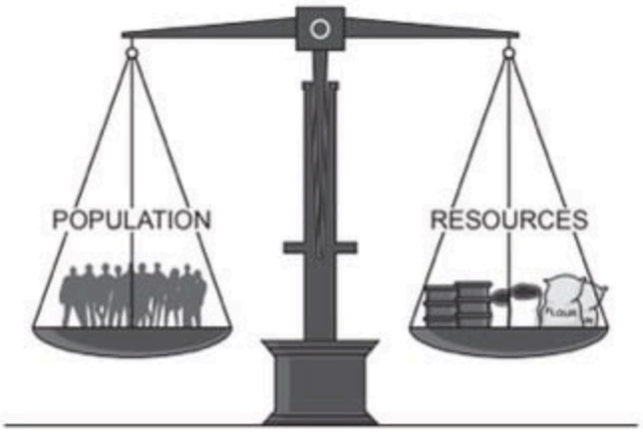
Balanced Views: Resource Stewardship and Sustainable Management

While pessimistic and optimistic views dominate public debates, many modern geographers and sustainability theorists take a **balanced perspective**. They argue that resource scarcity is real—but can be managed through **responsible stewardship**.

Resource stewardship suggests that:

1. **Humanity must acknowledge ecological limits** (e.g., climate change, biodiversity loss, water shortages).
2. **Technology and innovation can help**, but only if combined with sustainable policies.
   Consumption patterns matter as much as population size.

This view is reflected in the **UN Sustainable Development Goals**, which encourage countries to reduce ecological footprints, promote equitable consumption, and protect ecosystems. Countries such as **Costa Rica** demonstrate balanced approaches by protecting forests, investing in renewable energy, and expanding social equity while maintaining economic growth.



Why Balanced Views Matter for IB Geography

- They recognise that **population size** alone does not determine stress; **consumption patterns** (especially in HICs) are equally or more important.
- They incorporate concepts from the IB syllabus such as **fertility decline**, **ageing populations**, and **migration**, showing how demographic transitions influence resource use.
- They emphasise **ecological footprints**, a key concept in the Resource Consumption unit. A small country like **Qatar** may have only 3 million people but has one of the world's highest per-capita ecological footprints.
- They align with the concept of resource stewardship—the responsibility to manage resources sustainably for the benefit offuture generations.

Balanced frameworks such as **circular economy thinking**, **resource decoupling**, and **sustainable intensification** offer realistic paths between the extremes of Malthusian collapse and cornucopian abundance.

Conclusion

Debates about population and resources continue to be central to global development. Malthus and neo-Malthusians warn that humanity risks crossing ecological limits, with examples in the Sahel, Yemen, and regions facing water scarcity. Cornucopian thinkers such as Boserup and Simon argue that human ingenuity can overcome resource challenges, supported by innovations like the Green Revolution and renewable energy transitions. Balanced, stewardship-focused perspectives recognise both possibilities: that human creativity is powerful, but must work within environmental constraints.

For IB Geography students, understanding these divergent viewpoints is essential for analysing population trends, ecological footprints, and the future challenges of sustainability. The truth likely lies between the extremes—requiring a careful mix of innovation, conservation, and equitable global resource management.