Sociétés ET TRANSITIONS

Economie et environnement # 4

ECONOMIE ET ENVIRONNEMENT #4

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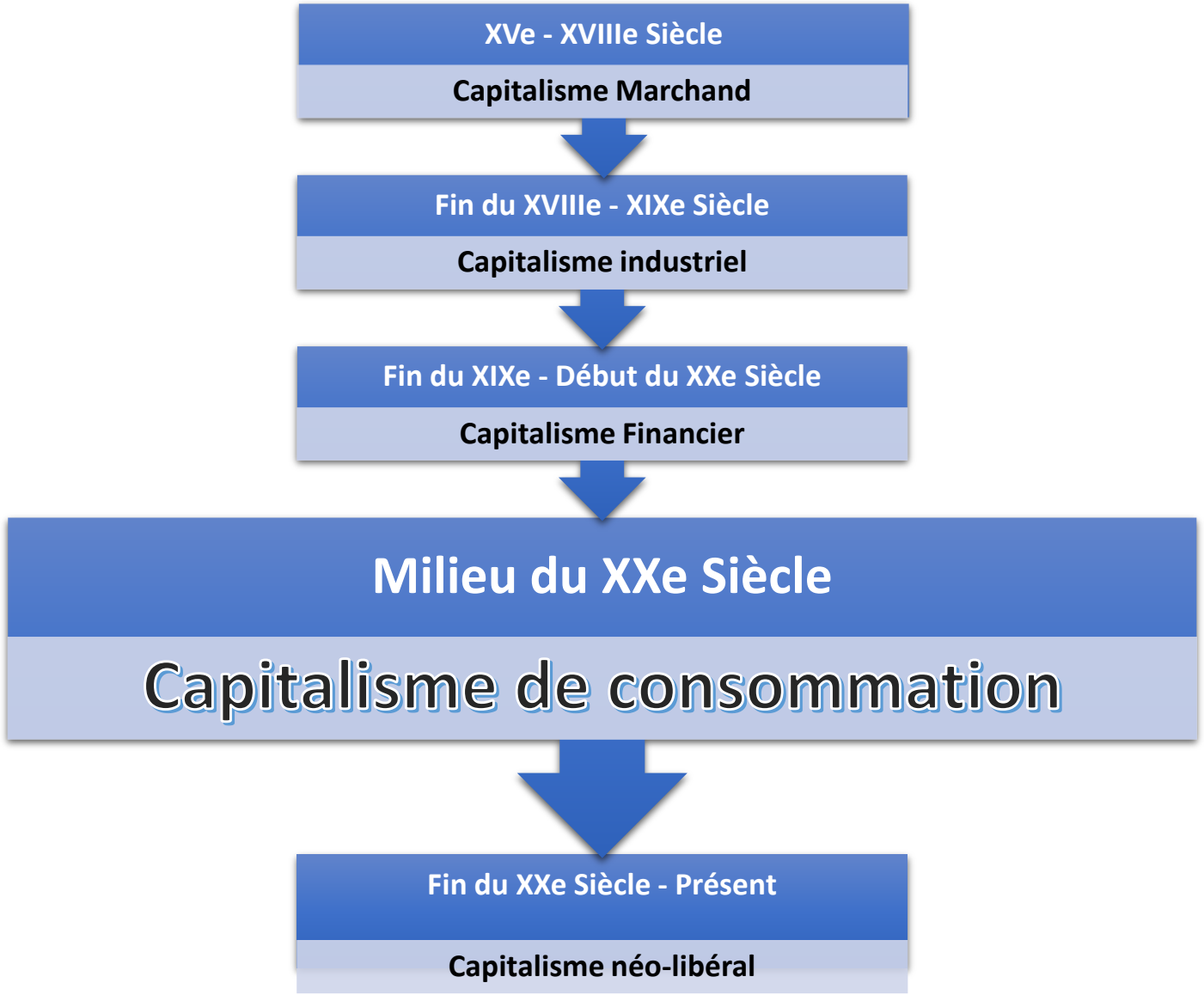

XVe - XVIIIe Siècle
Capitalisme Marchand
Fin du XVIIIe - XIXe Siècle
Capitalisme industriel
Fin du XIXe - Début du XXe Siècle
Capitalisme Financier
Milieu du XXe Siècle
Capitalisme de consommation
Fin du XXe Siècle - Présent
Capitalisme néo-libéral

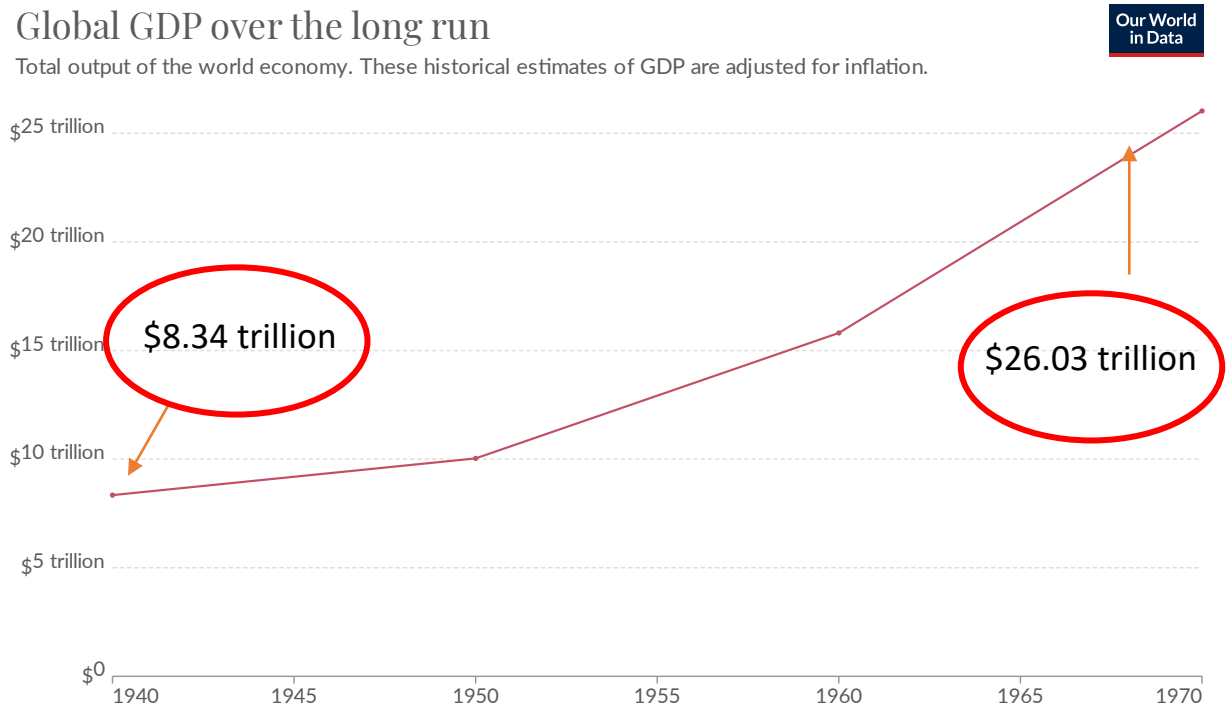
Croissance économique

- Une prospérité économique
- Boom après la seconde guerre mondiale
- Production de masse et Consommation de masse
- Innovations technologiques
- Société de consommation
- Etat-providence
- Ouverture des marchés
- Augmentation des inégalités

Evolution du PIB dans le monde

1. International dollars: International dollars are a hypothetical currency that is used to make meaningful comparisons of monetary indicators of living standards. Figures expressed in international dollars are adjusted for inflation within countries over time, and for differences in the cost of living between countries. The goal of such adjustments is to provide a unit whose purchasing power is held fixed over time and across countries, such that one international dollar can buy the same quantity and quality of goods and services no matter where or when it is spent. Read more in our article: What are Purchasing Power Parity adjustments and why do we need them?

Evolution du PIB dans le monde



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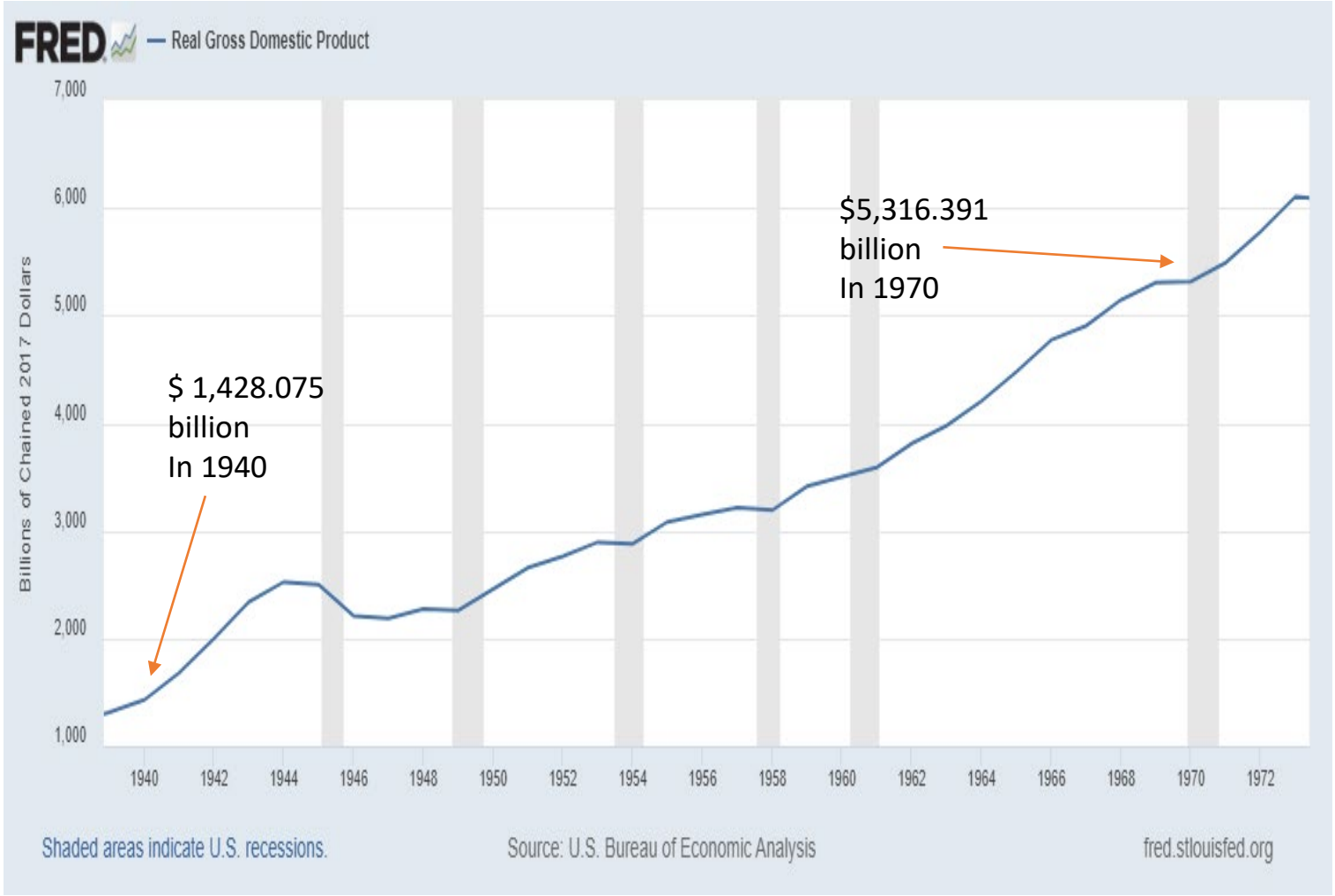
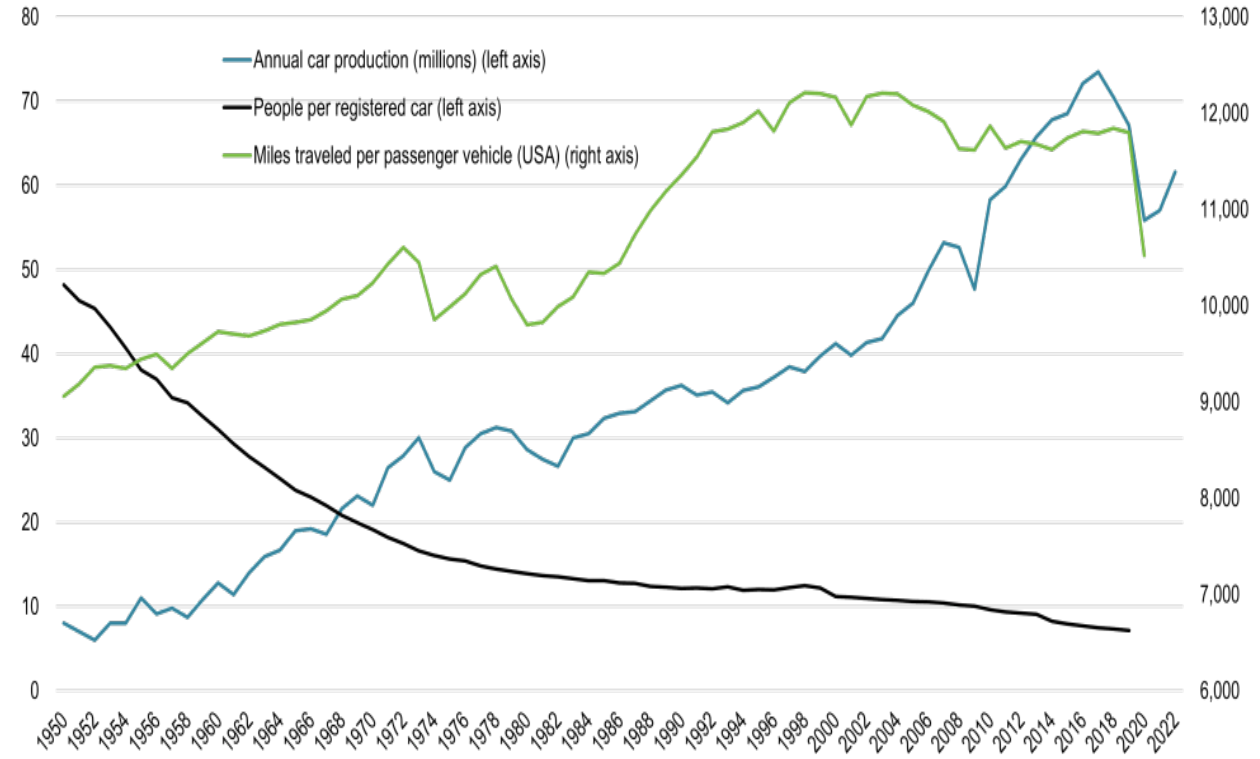
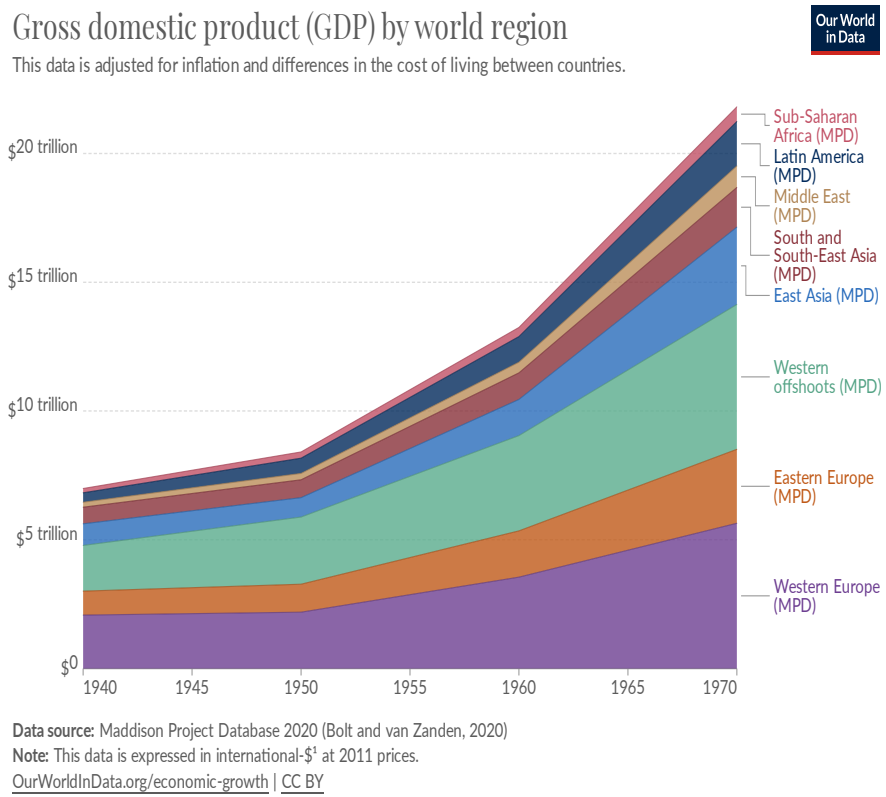
Evolution du PIB aux USA



Indicateurs d'utilisation des véhicules, Monde, 1950-2022

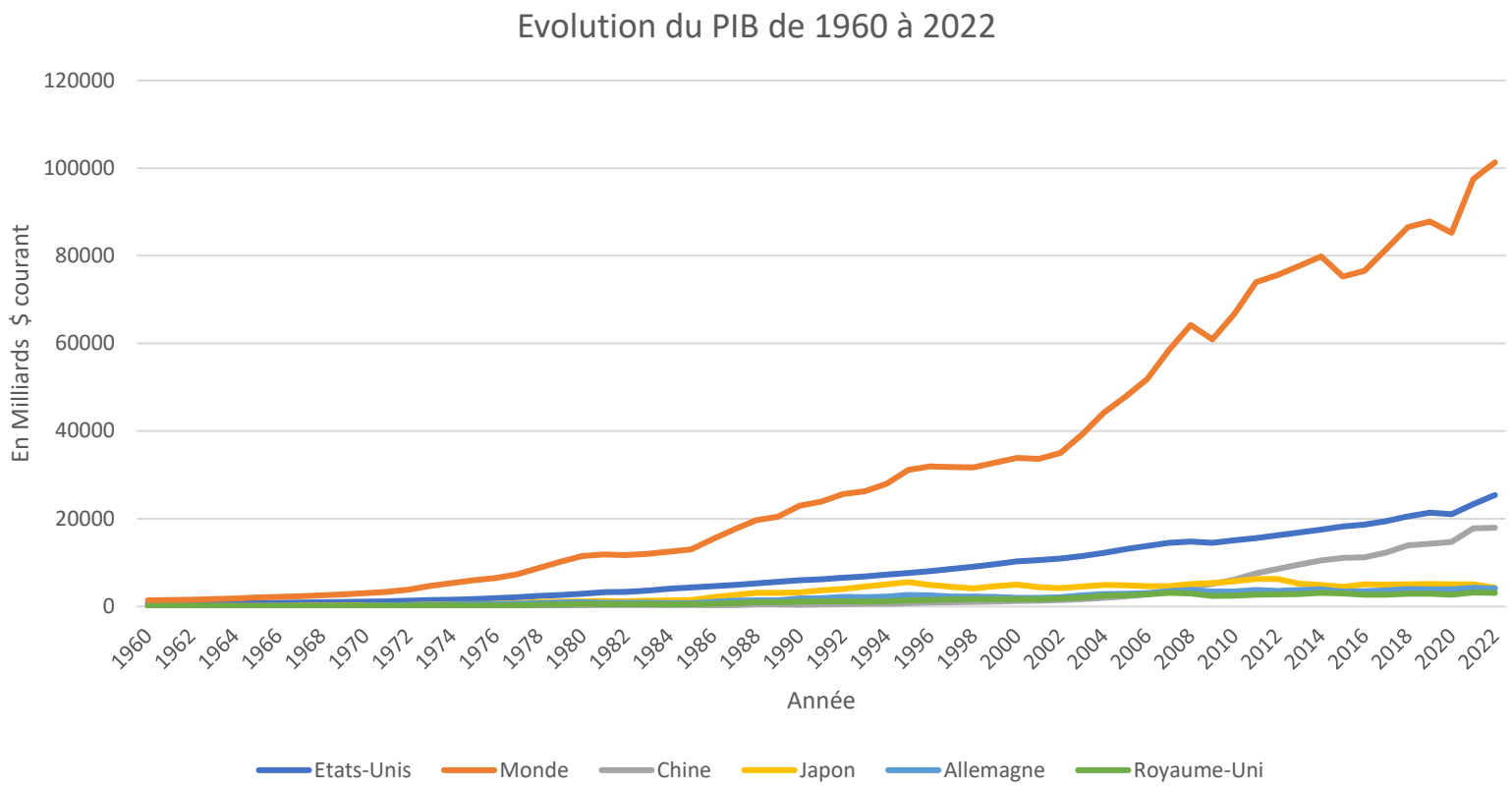


Evolution des inégalités



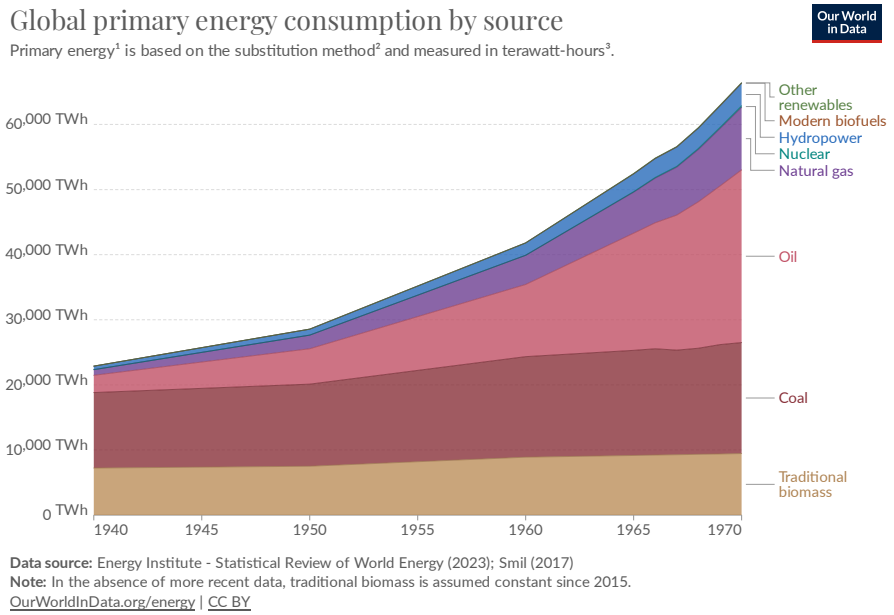
Régions	PIB en Milliard $US	
	1940	1970
Afrique Subsaharienne	167,2	570,87
Amérique Latine	368,49	1730
Moyen-Orient	193,14	830,04
Asie du Sud et du Sud-Est	644,9	1540
Asie de l'Est	836,67	3000
Pays d'immigration européenne (Western Offshoots)	1780	5620
Europe de l'Est	926,96	2870
Europe de l'Ouest	2080	5640
Total	6990	21810

PIB par Pays



Source: Banque mondiale

Utilisation massive de combustibles fossiles dans le monde



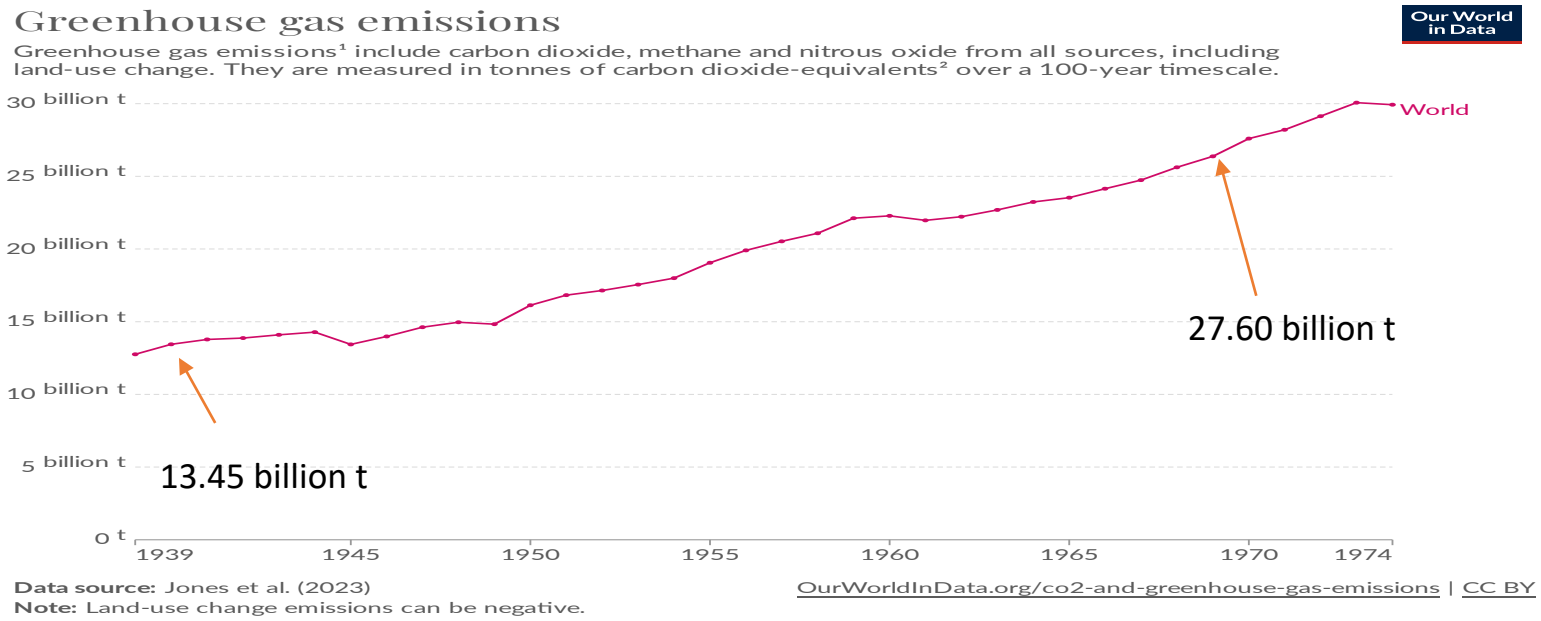
1. Primary energy: Primary energy is the energy available as resources – such as the fuels burnt in power plants – before it has been transformed. This relates to the coal before it has been burned, the uranium, or the barrels of oil. Primary energy includes energy that the end user needs, in the form of electricity, transport and heating, plus inefficiencies and energy that is lost when raw resources are transformed into a usable form. You can read more on the different ways of measuring energy in our article.

2. Substitution method: The 'substitution method' is used by researchers to correct primary energy consumption for efficiency losses experienced by fossil fuels. It tries to adjust non-fossil energy sources to the inputs that would be needed if it was generated from fossil fuels. It assumes that wind and solar electricity is as inefficient as coal or gas. To do this, energy generation from non-fossil sources are divided by a standard 'thermal efficiency factor' – typically around 0.4 Nuclear power is also adjusted despite it also experiencing thermal losses in a power plant. Since it's reported in terms of electricity output, we need to do this adjustment to calculate its equivalent input value. You can read more about this adjustment in our article.

3. Watt-hour: A watt-hour is the energy delivered by one watt of power for one hour. Since one watt is equivalent to one Joule per second, a watt-hour is equivalent to 3600 Joules of energy. Metric prefixes are used for multiples of the unit, usually: - kilowatt-hours (kWh), or a thousand watt-hours. - Megawatt-hours (MWh), or a million watt-hours. - Gigawatt-hours (GWh), or a billion watt-hours. - Terawatt-hours (TWh), or a trillion watt-hours.

Source d'énergie	Térawatt heures	
	1940	1970
Biomasse traditionnel	7222	9444
Charbon	11586	17059
Pétrole	2653	26520
Gaz naturel	875	9615
hydroélectricité	433	3473
Nucléaire	-	224
Biofuel moderne	-	14
Autres renouvelables	-	80
Total	22869	66429

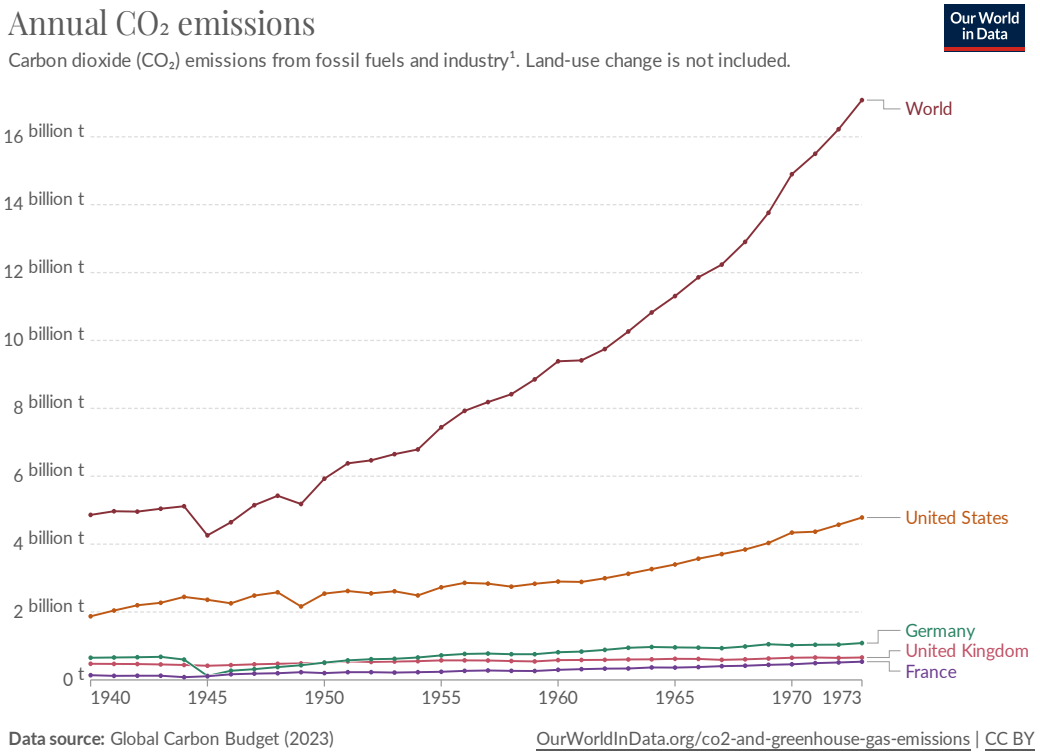
Emissions de GES dans le monde



1. Greenhouse gas emissions: A greenhouse gas (GHG) is a gas that causes the atmosphere to warm by absorbing and emitting radiant energy. Greenhouse gases absorb radiation that is radiated by Earth, preventing this heat from escaping to space. Carbon dioxide (CO_2) is the most well-known greenhouse gas, but there are others including methane, nitrous oxide, and in fact, water vapor. Human-made emissions of greenhouse gases from fossil fuels, industry, and agriculture are the leading cause of global climate change. Greenhouse gas emissions measure the total amount of all greenhouse gases that are emitted. These are often quantified in carbon dioxide equivalents (CO_2eq) which take account of the amount of warming that each molecule of different gases creates.

2. Carbon dioxide equivalents (CO_2eq): Carbon dioxide is the most important greenhouse gas, but not the only one. To capture all greenhouse gas emissions, researchers express them in "carbon dioxide equivalents" (CO_2eq). This takes all greenhouse gases into account, not just CO_2. To express all greenhouse gases in carbon dioxide equivalents (CO_2eq), each one is weighted by its global warming potential (GWP) value. GWP measures the amount of warming a gas creates compared to CO_2. CO_2 is given a GWP value of one. If a gas had a GWP of 10 then one kilogram of that gas would generate ten times the warming effect as one kilogram of CO_2. Carbon dioxide equivalents are calculated for each gas by multiplying the mass of emissions of a specific greenhouse gas by its GWP factor. This warming can be stated over different timescales. To calculate CO_2eq over 100 years, we'd multiply each gas by its GWP over a 100-year timescale (GWP100). Total greenhouse gas emissions – measured in CO_2eq – are then calculated by summing each gas' CO_2eq value.

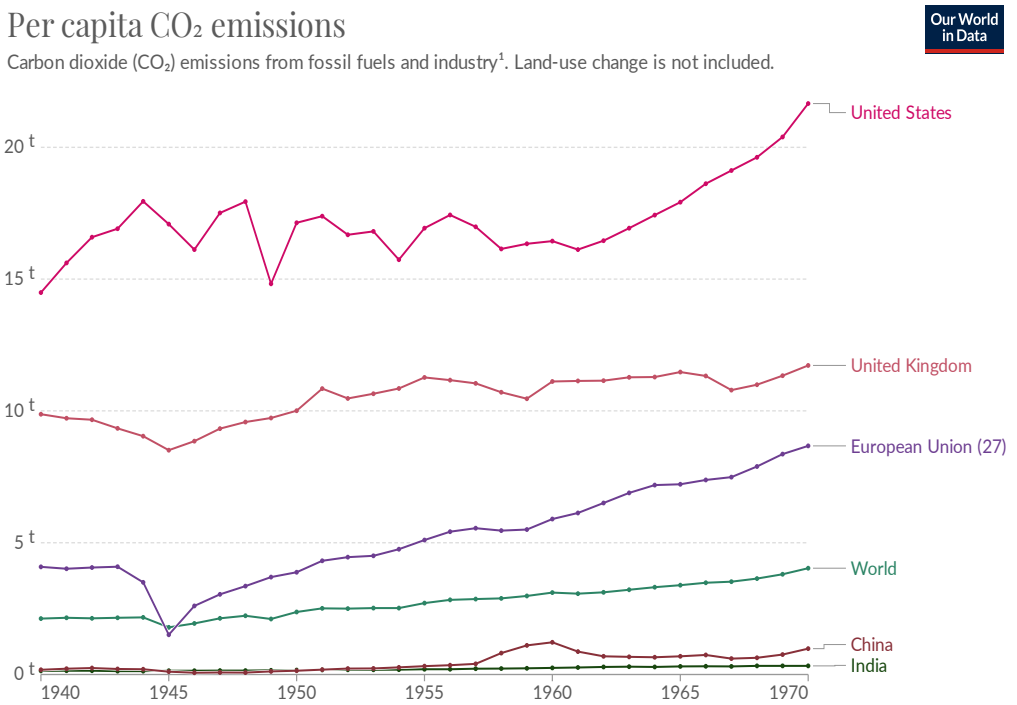
Emissions de CO2 dans le monde



1. Fossil emissions: Fossil emissions measure the quantity of carbon dioxide (CO_2) emitted from the burning of fossil fuels, and directly from industrial processes such as cement and steel production. Fossil CO_2 includes emissions from coal, oil, gas, flaring, cement, steel, and other industrial processes. Fossil emissions do not include land use change, deforestation, soils, or vegetation.

Pays	Million de tonnes	
	1940	1970
Le Royaume Uni	475.14	625,58
L'Allemagne	654,33	1 030
Les Etats-Unis	1 870	4 340
La France	137,74	460,42
Le Monde	4 860	14 900

Emissions de CO2 par tête dans le monde



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Pays	tonnes	
	1940	1970
Le Royaume Uni	9,9	11,7
Les Etats-Unis	14,5	21,7
L'union européenne (27)	4,1	8,7
La Chine	0,2	1
L'Inde	0,1	0,3
Le Monde	2,1	4

Conscience écologique

- Littérature influente : Printemps silencieux (Silent Spring) - Rachel Carson (1962)
- Avancement dans la climatologie
- Naissance de l’écologisme
- Conscience limitée

Conclusion

- Une croissance économique en continuelle progression
- Une progression de l’industrialisation et une consommation de masse
- Augmentation des inégalités
- Impact négatif accru sur l’environnement
- Une prise de conscience écologique toujours limitée