

Sustainable Development Survey on Definitions

- 1. When you hear or see the word “sustainability” what comes to mind? How do you define it? What feelings or questions or beliefs does it elicit from you?**

MOST COMMON

Future generations
Using resources wisely
Degrading of the environment
Equilibrium
Permanent
Long-term
Physical/economic/social

OTHERS

Compensating
Indefinable
Steady state
Targets
Externalities
Custodianship/stewardship
Economic growth
Justice
Weak vs. strong sustainability
Anger about apathy
Sadness at extinction of species
Reproducible
Solidity

- 2. The most widely used definition of Sustainable Development (SD) is the one developed in the Brundtland report Our Common Future:*

SD is ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Our Common Future, 1987, 43).

- a. What is your general reaction to this definition?**

MOST COMMON

Good but vague
What does ‘needs’ mean?
Impractical

OTHERS

Nice, but difficult to measure success
Doesn't mention environmental damage
Needs further explanation
Good starting point
Very good
Reasonable
Too general
Too narrow
Excellent for showing the political point of view
Needs inter/intra generational
North-south debate
Sustainable consumption

**b. How useful would it be in the context of economics education?
Please explain.**

MOST COMMON

Not very
Useful
Starting point
Not specific enough

OTHERS

"Development"?
Trade offs?
Intergenerational issues not black and white
Discounting problem
Utility measurement problem
Non-use values?
In context of political economy

c. "This definition stresses the concept of intergenerational justice. We have no right to degrade our planet to prevent future generations from living as well as we do." Is this what you get from the definition? Why or why not?

MOST COMMON

This is just one aspect
Don't like the idea

OTHERS

What are the preferences of future generations?
"Degrade"?
Economic growth?
Why not just say: we don't have the right to degrade?

Not necessarily including the impact of resource usage
Doesn't help with fundamental problem of trade off between technology and institutional progress
Should be about social responsibility and future generations
Need to distinguish between renewable and non-renewable resources
Only in terms of basic needs
Prefer equity over justice

d. How useful is the concept of intergenerationality to economics education? Please explain.

MOST COMMON

Important

OTHERS

Can be ignored in some economics education
Needs additional work
Used theoretically, it's useful but it's more difficult to apply
Intragenerational also important
Key issue in development
Good for debate

3. The UK government's SD definition is as follows:

- *Social progress which recognizes the needs of everyone.*
- *Effective protection of the environment.*
- *Prudent use of natural resources.*
- *Maintenance of high and stable levels of economic growth and employment.*

a. What is your general reaction to this definition?

Better than Brundtland

Vague

Fairly standard set of multi-objectives of government policy

Good

No reference to inter/intra generational

Useless

"Everyone"?

"Effective"?

"Prudent"?

Clarifies link to environment but could mean if some areas are protected, that's okay

First bullet good, others defined too narrowly

Clunky, some bits redundant when you understand Brundtland

Ignores relationships

b. How useful would it be in the context of economics? Please explain.

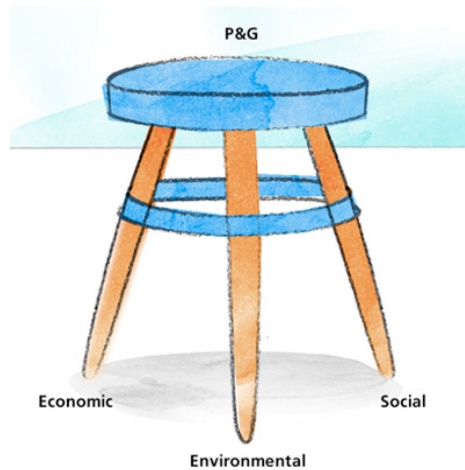
No
Only to contrast different approaches
Much better
Useful starting point
Need fuller explanation of what aims are and how
Multi-objective good
Trade offs
Not clear
“Prudent” is relative
Might help but might constrain discussion
Difficult to operationalize
Too static but ok
Useful if given empirical evidence

This definition has been criticised widely because it is ultimately not possible to reconcile high levels of economic growth with the scientific fact that we are living in a materially non-growing, closed system of which the economy is just a subsystem.

c. Do you agree with this criticism? Why or why not?

Want evidence of this fact
It's been proven wrong
No, abstracts from technological progress
“Closed system”?
No, more complex than this: technical trade offs differ between countries
Hgh level of growth not needed
No, growth can be quality not quantity
More important is the relative weights
CBA has drawbacks: subjective
No, needs to be about human survival and betterment
Yes, looks difficult to combine, shouldn't be part of sustainability
Yes, but find bullet point is out of lace
Too vague
Implications of both definitions: state support for certain types of technological innovation (i.e., those protective of the environment)

4. *In the last few years, another definition has gained currency, especially in the business world. It is usually called the three-legged stool definition:*



It stresses the interdependence of the three elements. If you take one leg away, the stool collapses.

a. What is your general reaction to this definition?

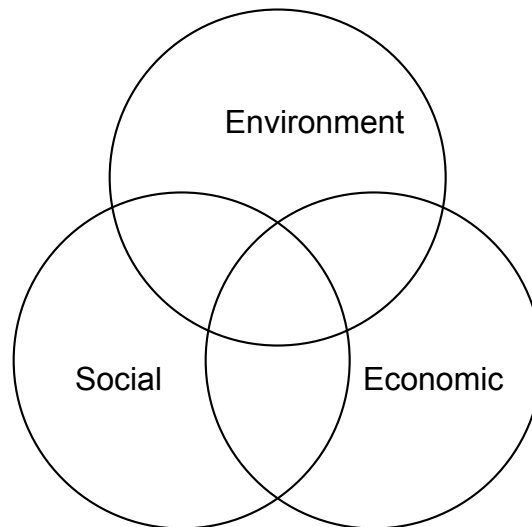
- Sensible
- Nonsense
- Not a definition
- Very general
- Awful: suggests the three are separate
- If included other aspects, it'd be many-legged
- Good because it shows other elements
- Good but lacks inter/intra generational
- Glad economics is given equal status/weight
- Need to analyze and define relationships between the three
- Better integration of the environment
- Not better than other two
- Pandering to business
- Don't like pictures
- Doesn't show how linked
- Implies need each other
- Implies all equal and at same level
- Good that there is no presumption of future values
- Emphasizing social is potentially useful

b. How useful would it be in the context of economics? Please explain.

- Very
- Not very
- Good for generating debate
- Complements other definitions
- Constrains thinking

Not sure what ultimate objectives are
“Social”?
Okay but who is the stool for?
Useful because widely accepted

The problem with this reductionist definition (which is often present as seen below), is that it, factually wrongly, assumes that all three elements are equally important and interact on the same level.



c. Do you agree with this? Why or why not?

Yes

Lacks definition

Depends how they are drawn

Beside the point: they just need to be present

Hard to believe they're equal

Shows complementariness and trade offs

No, nonsense diagrams

Helps but still assumes economics is separate to the environment

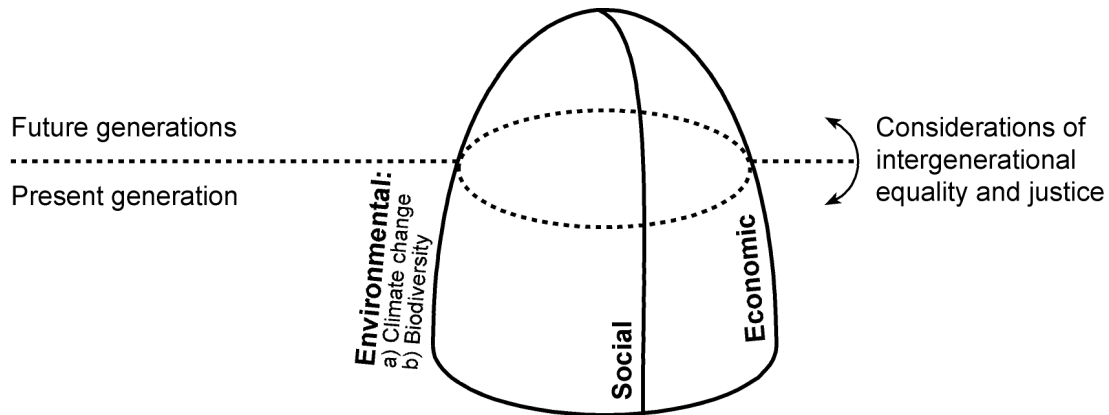
Anthropocentric?

Yes, debases the original definition of SD from Stockholm to Rio

Must be judged in context

Unnecessary diagram

- 5. An interesting further development of the three-legged stool definition is represented by the following figure. Even though it still doesn't give any notion of the relative dependence of different spheres from each other, it at least re-introduces the dimension of intergenerational equity from the Brundtland definition:*



It also includes specific environmental concerns relating to various international conventions.

a. What is your general reaction to this definition?

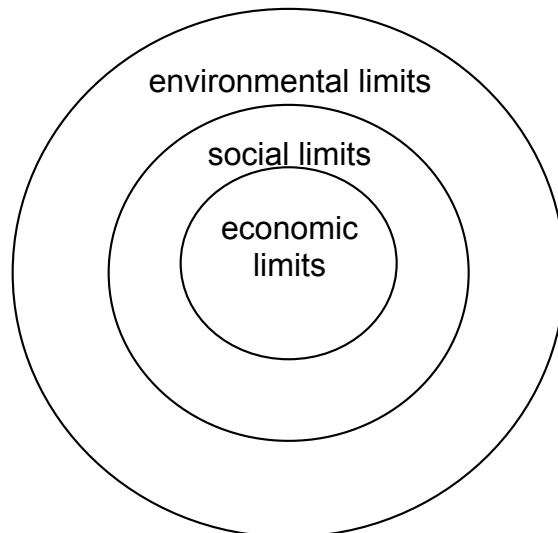
- Too vague
- Same old concept
- Better than 3-legged
- More difficult to get across
- More elements are needed in environment
- Don't understand
- Better than last 2
- Like inclusion of inter/intra generational
- Worse than 3-legged: more complicated
- Reasonable but could replace a & b with something else
- Fictional concept of intergenerational equity
- Use all diagrams to help
- Indifferent
- Leaves out intragenerational
- Regards economic development as good in its own right
- Too elaborate: key issues don't stand out sufficiently clearly — they should hit one in the eye

**b. How useful would it be in the context of economics education?
Please explain.**

- No
- Confusing
- Not sure
- As starting point
- Not very precise
- Brings future into equation
- Useful to see different approach but not an improvement

Too simplistic
Need to lay out underlying argument
Useful but not practical (time)
Prefer to start with Brundtland then develop idea with examples
Would make econ. Dev. More grounded in contemporary resource ec.
Good summary of various views and provides organic approach to analysis
Like the depth: present/future generations
Useful for people not aware of environmental problems
Restricts economic concepts to climate change and biodiversity

6. *The so-called 'Russian doll' definition address this problem by showing the hierarchical relations between the three elements. There is simply no life at all without the environment (planet earth), and the economy is also a subsystem of the social sphere.*



a. What is your general reaction to this definition?

Nothing new
Good: links between them
"Limits"?
Don't like
Not a definition: just description
Typical ecologist vision
As bad as first
Too reductionist
No information on impact of changes
Hierarchical relationship appealing
Economics underlies everything and so is most important factor
Too deterministic

More of a 'strong' sustainability argument

**b. How useful would it be in the context of economics education?
Please explain.**

MOST COMMON

Not useful

As a starting point

OTHERS

Too confusing

Too extreme ecologist

Easier to explain as it's similar to other models

How is the economics a subsystem of the social sphere?

Doesn't show interactions well

Tilted too heavily towards resources

Good to offer different diagrams

Need 'neutral' point of view: we are just here to give tools for thinking

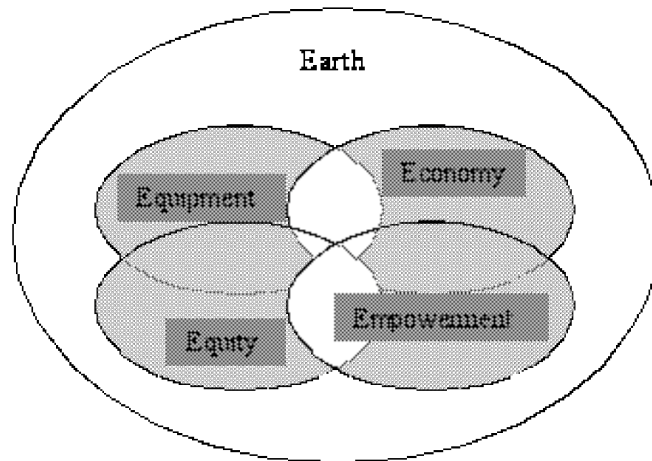
Economics education should:

- i. Teach economists that economic science is a branch of social science
- ii. Teach economists that economic policy is a branch of social policy
- iii. Teach economists that the free market is sorely constrained in the extent to which it can cope with environmental limits, with or without market imperfections

Broadens it

Prefer stool

7. *The following model again stresses the fact that all other elements are sub-systems of the ecosphere, but it tries to emphasise the interdependence of the subsystems. It also attempts to make more visible two other important subsystems (empowerment: the political system; and equipment: science and technology), which are crucial drivers for (un)sustainability:*



(The words inside say: Equipment, Economy, Equity, Empowerment.)

a. What is your general reaction to this definition?

- Not useful
- Better than previous
- Complicated
- More confusing than illuminating
- Interesting, new
- System-focused view of problem
- In conjunction with other diagrams
- Skeptical
- It shows all elements as subsystem and also interdependence, but doesn't explain SD
- Needs to be a bit more rigorous
- Looks like someone's opinion: what do we do with this?
- Idea of drivers fits with business students but ones included don't seem relevant
- Need political economy foundation
- Stresses important things

**b. How useful would it be in the context of economics education?
Please explain.**

MOST COMMON

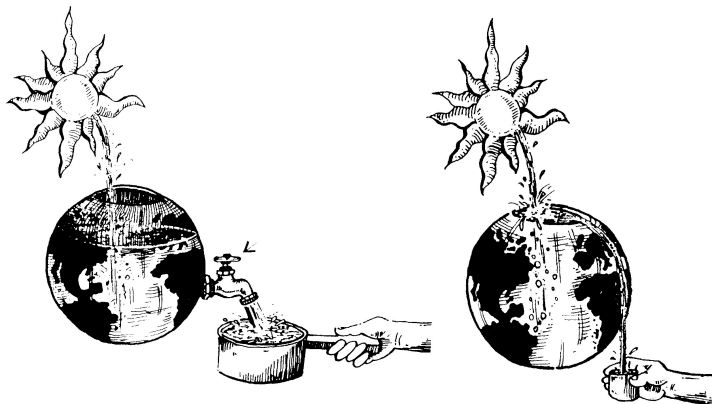
Not useful

OTHERS

- New element of empowerment
- Good to introduce to students for debate
- Lacks intergenerationality
- Good to show interconnections but is not SD

Limited to intro material for course on economic analysis
 Difficult to operationalize
 Useful if different drivers
 Marginal
 Useful for emphasis on technology and poli/soci awareness
 Especially suitable for joint honours
 Useful if linked to sound political economy
 Not very useful: implies equity and technology are separate from economics: no allowance for endogeneity; there should also be much more overlap between empowerment and equipment if we are considering interaction between areas of concern

8. *The following figure illustrates very sharply the fact that we are living within a materially non-growing, closed system which is only open to energy inflow from the sun. The tap on the left-hand side symbolises technology, which is accelerating overuse of resources beyond sustainable limits.*



This figure is a visualisation of the scientific laws underlying the so-called four system conditions developed by The Natural Step:

- *System Condition 1:* Substances extracted from the Earth's crust must not systematically increase in nature. This means that, in a sustainable society, fossil fuels, metals and other materials are not extracted at a faster pace than their slow redeposit into the Earth's crust or their absorption by nature.
- *System Condition 2:* Substances produced by society must not systematically increase in nature. This means that, in a sustainable society, substances are not produced at a faster pace than they can be broken down and reintegrated by nature or re-deposited into the Earth's crust.

- *System Condition 3*: The physical basis for the productivity and the diversity of nature must not be systematically diminished. This means that, in a sustainable society, the productive surfaces of nature are not diminished in quality or quantity, and we must not harvest more from nature than can be recreated.
- *System Condition 4*: We must be fair and efficient in meeting basic human needs. This means that, in a sustainable society, basic human needs must be met with the most resource-efficient methods possible, including a just resource distribution. (The Natural Step 1999).

a. **What is your general reaction to this definition?**

More sensible than previous one

More detail

Good

Understates scope for substitutability of resources

Pictures don't demonstrate principles

Doesn't stress economics too much

Too long

Confuses justice with efficiency

Useful in explaining SD but not a definition

Highly confusing: fallacy to assert that technology uses more resources

Some physics

Would emphasize final point

Ignores technological development

No

Too scientific

Logical stages

Misses point

Maybe if teaching environmental economics

Too difficult for students

Innovative but still deterministic

Deep green perspective (strong sustainability)

Ignores substitutability

Okay but neoclassical economic theory says a market with no market imperfections will do all that automatically

1-3 too strong?

b. **How useful would it be in the context of economics education?
Please explain.**

Useful

Not useful

Need to examine underlying argument

Useful to explain government

Doesn't explain importance of social systems and technology

Might be good framework for a broadly focused course

Doesn't address important issues

What is "just resource distribution"?

Why isn't the market a form of "just distribution"?

Shallow

Like picture but not message

Good that raises issue of equity and fair distribution, but more appropriate for exact sciences

Useful for focusing on limits but understates scope for substitutability of resources

More of an ecologist's definition

Should 'ecological economics' be actual part of syllabus now?

Harmful

Good for students to debate

Would not use this detail in development economics

Too difficult for students

Marginal

Quite: could lead to discussion of externalities, of market and shadow valuations, of resources and of cost effectiveness and distributional issues

9. *The last model, increasingly used in the UK, is the Five Capital Model. It also implies a hierarchy, because a capital which is lower down the list is dependent on the capitals listed previously:*

- **Natural capital** is any stock or flow of energy and material that produces goods and services. It includes:

- resources – renewable and non-renewable materials*
- sinks – that absorb, neutralize or recycle wastes*
- processes – climate regulation.*

Natural capital is the basis not only of production but of life itself.

- **Human capital** consists of people's health, knowledge, skills and motivation. All these things are needed for productive work. Enhancing human capital through education and training is central to a flourishing economy.
- **Social capital** consists of the institutions that help us maintain and develop human capital in partnership with others, for example families, communities, businesses, trade unions, schools and voluntary organizations.
- **Manufactured capital** consists of material goods or fixed assets which contribute to the production process rather than being the output itself, for example tools, machines and buildings.
- **Financial capital** plays an important role in our economy, enabling the other types of capital to be owned and traded. But unlike the other types, it has no real value itself but is representative of natural, human, social or manufactured capital, for example shares, bonds or banknotes.

Sustainable development is the best way to manage these capital assets in the long term. (developed by the Forum for the Future [www.forumforthefuture.org.uk]).

a. What is your general reaction to this definition?

Much more useful
Reasonable
More model than definition
Not clear
Only useful for SD course
Good review
Disagree with some of the definitions
Too long winded
No
Good and clear but static
Indicates importance of environment
Interesting but understates feedback
Really useful but only if first built on a firm understanding of SD
Good for debating amongst economists
Misses out on technological progress
Generally agree but before previous
More refined definition
Indifference
Extremely misleading: only need total and natural capital
Potentially interesting but calling everything capital...?
Don't like first sentence

**b. How useful would it be in the context of economics education?
Please explain.**

Useful starting point for discussing different types of capital
More useful than previous
Not very
Would use in combo with previous
Doesn't convey interdependence but good definition of components
Holistic, greater awareness of links between capitals
Misleading
No reference to intergenerational
Useful if we show how each can be achieved: best sustainable solution
Financial capital has value: this is gross misconception: must be defined
Fairly useful
Very good: conveys what others didn't
Not for students, but good (orgs: gov't/commercial)
Misses the point

More refined

10. Do you know of any definitions of sustainability that you prefer over the ones you've seen here? If so, you can write them here, or give us a general reference to them, or say that you'll get back to us via e-mail with the information.

Don't like definitions

Principle 3 of the Rio Declaration: The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations

Pursuing development strategies that foster good governance and secure economic growth while protecting the environment and promoting social equity (Euro Comm?)

Trade offs in general definition

Sustainable consumption must be stressed

Strong versus weak sustainability