RCE
EUROPEAN MEETING

RCE BRITTANY

FRANCE

AUGUST 29th and 30th

VANNES

CRE BRETAGNE

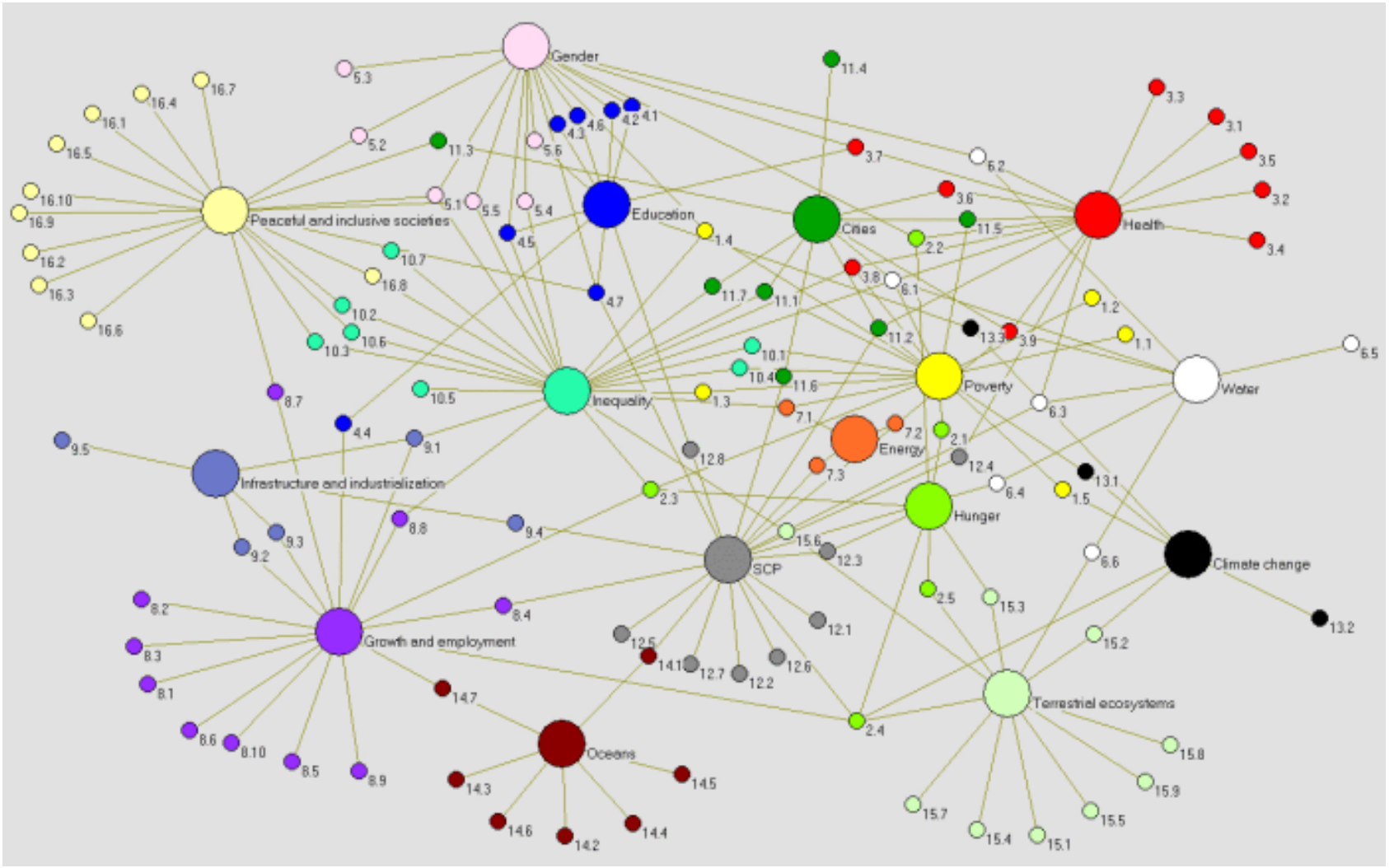
A TEACHER'S PERSPECTIVE ON THE INTERACTIONS BETWEEN THE UNITED NATIONS' SDGs

Françoise Laveuve et Salim Lardjane

A growing literature on the interactions between SDGs

- Leblanc (UN DESA, 2015): presents a mapping on the interactions between the SDGs from the political point of view.
- **He studies the links between SDGs by counting the number of targets that they share in pairs**

A growing literature on the interactions between SDGs

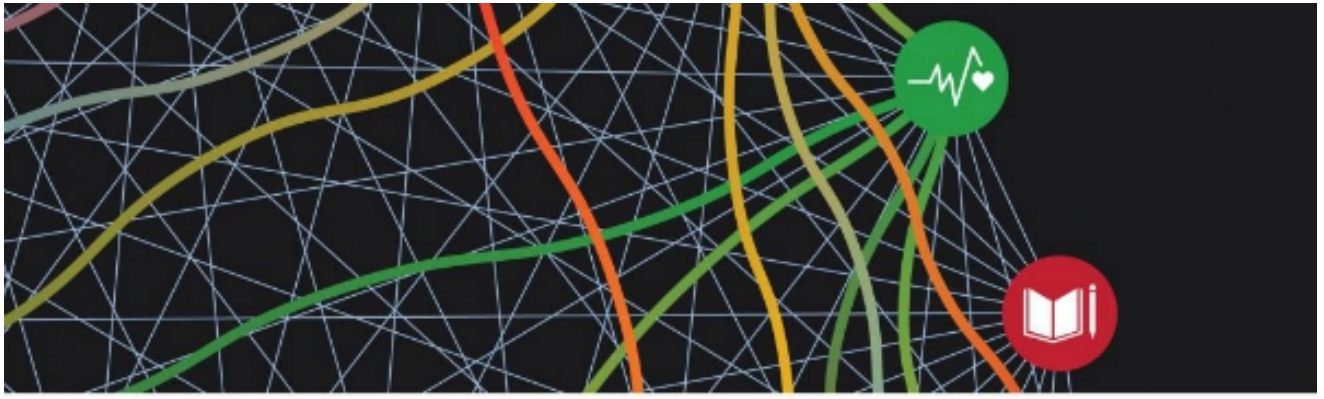


A growing literature on the interactions between SDGs

- Nilsson, Griggs and Visbeck (Nature, 2016) and the publications of the International Council for Science (2016) approach the interactions between SDGs from a scientific point of view.
- **They propose a methodology to quantify the intensity and direction of relations between SDGs.**

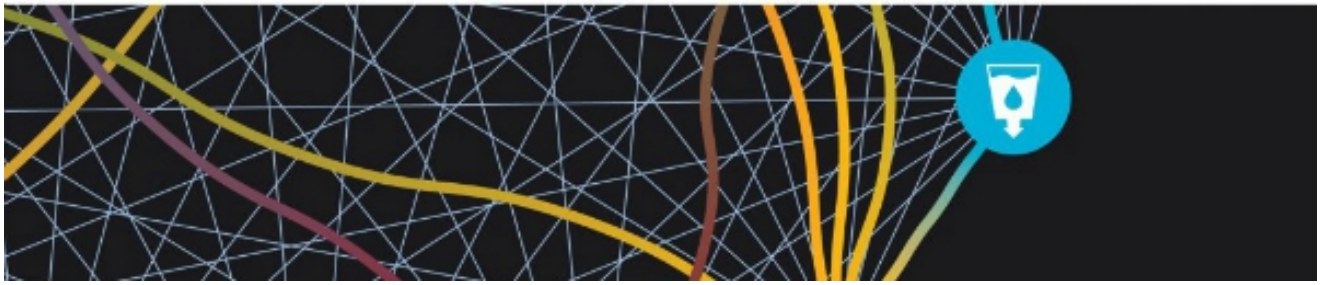
The comparison between the maps obtained in both cases enables to determine and to study the common points and the differences.

The relationships between SDGs



A GUIDE TO
SDG INTERACTIONS:
FROM SCIENCE
TO IMPLEMENTATION

INTERNATIONAL
COUNCIL
FOR SCIENCE



But how to communicate on SDGs and integrate them into the teaching on Sustainable Development ?

The relationships between SDGs : a different approach

It is a bottom-up approach where the interactions between SDGs are approached from a teacher's point of view.

Methodology

Making Students find by themselves the relationships between SDGs :

- by analysing the words used in the formulation of the SDG concerned

- by asking the good questions that will help them to determine causes, consequences, impacts

- then by searching and finding the links with other SDGs

The relationships between SDGs : a different approach

One example

SDG 1 ***« End poverty in all its forms and all over the world »***

Questions

- Define the word « Poverty »

- Determine all the forms it can take

- What can generate poverty ?

- What does poverty imply, as consequences ?

- Compare poverty in the North and in the South of the Planet

- Then starting from your answers, find links with other SDGs

The relationships between SDGs : a different approach

Example : SDG 1 « *End poverty in all its forms and all over the world* »

The answers will incite the students to determine links with :

- **SDG 2**: malnutrition, starvation
- **SDG 3**: illness, suffering, death
- **SDG 4**: inequality at school or no access at all to education and vocational training

But also that poverty in the South of the planet is increased by :

- **SDG 6**: unequal distribution of water resources
- **SDG 13**: the climate change impacts

The relationships between SDGs : a different approach

Then, studying statistics will deepen the research and the knowledge about poverty by revealing, for example, that:

- One billion people (one in seven) live on less than $ 1,9 a day, which is the extreme threshold of poverty
- Working is not a guarantee against poverty : more than 80% of the poor have a job but they are in fact exploited and underpaid, and remain poor, according to the ILO in its report « Employment and social issues in world 2016 » (Geneva, May 18th).

Finding the relationships between SDGs is to find solutions

Example SDG 2 : «*Eliminating hunger, ensuring food security, improving nutrition and promoting sustainable agriculture* »

- ***Can't be separated from SDG 1 and dependant from the same SDG***
- ***But SDG2 is also dependant from SDGs 12, 13, 14 et 15 which are the solutions to eradicate hunger in the world through :***

  - sustainable consumption and production patterns

  - fight against climate change

  - conservation and exploitation of the oceans in a sustainable way

  - preservation and restoration of terrestrial ecosystems.

Finding the relationships between SDGs is to find solutions

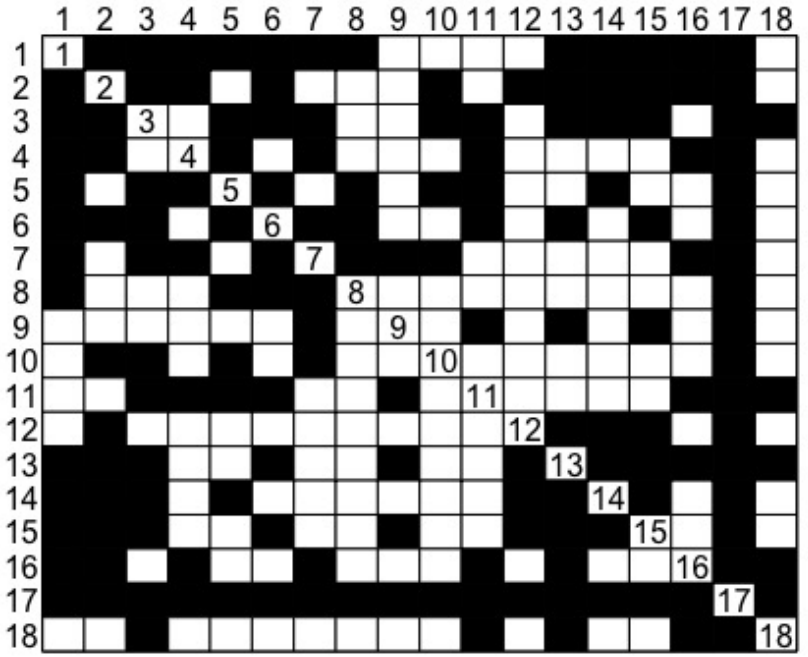
- According to FAO and WFP, one in nine people in the world is suffering from hunger
- In sub saharan Africa, one in four people is underfed, and underfeeding causes nearly half of children under five years old death, every year.
- FAO's archives explain the reasons, and also the remedies, such as the return to traditional cultures.

A visual exploration of the relationships between the SDGs

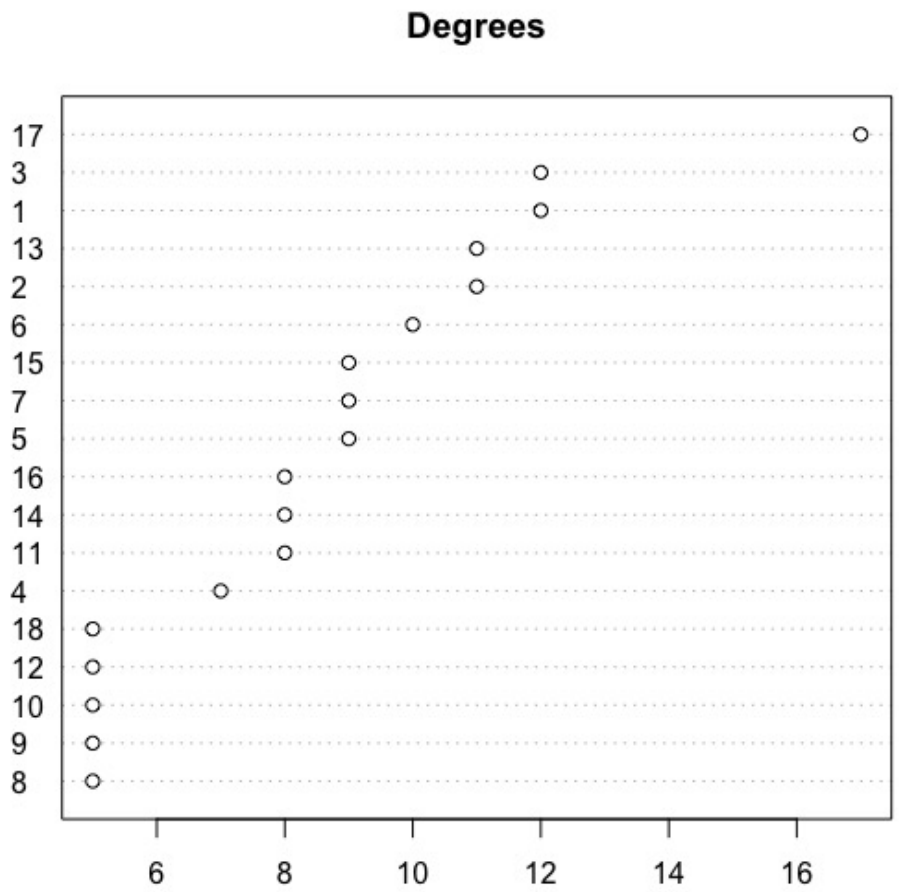
Once the exploration of all the SDGs is finished, graphical representations allow to synthesize these relations, as below :

- An adjacency matrix
- From this relational matrix, a non-oriented graph is deduced, each SDG being identified by its number
- Then a diagram is obtained, with the number of the SDGs on the ordinate, and the number of links, on the abscissa.
- Endly a graph where each color indicates a different category of SDGs, according to its position in the network. The size of the disks identifying the SDGs is proportional to their degree (i.e. Their number of links)

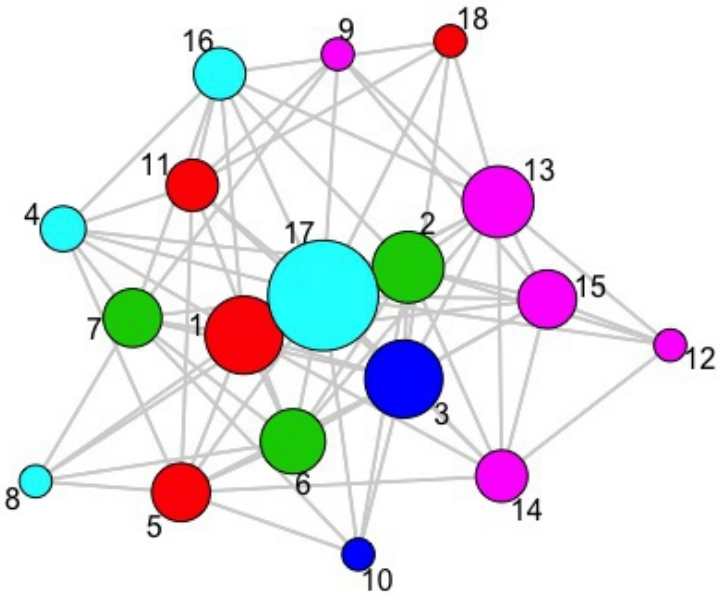
The socio-matrix



Degrees



Final representation



COMMENTS

There are five categories of SDGs

- **The first one** includes SDGs 17, 16, 4 and 8 and brings together education, economics, and the socio-political dimension, which constitute the fundamental foundation of Sustainable Development, without which it cannot be envisaged.
- **The second category** includes SDGs 9, 12, 13, 14, 15 in order to build a resilient infrastructure, to promote sustainable industrialization, sustainable production and consumption, to combat climate change and its impacts, to save oceans, seas and marine resources, and to restore terrestrial ecosystems by ensuring exploiting them in a sustainable way.

This is the heart of SD in its various forms.

COMMENTS

- The **third category** includes SDGs 2, 6 and 7 and is called the **Food-Water-Energy nexus** in the literature. Are concerned : access to water, access to energy, elimination of hunger, ensuring food quality.

  They are the most fundamental challenges of SD, which require the most urgent action.

- The **fourth category** includes SDGs 3 and 10 : good health, well-being at all ages, reducing inequalities in countries and between countries.

  These goals are linked and mix social and economic dimensions.

COMMENTS

- Finally, the fifth category includes Goals 1, 5, 11 : elimination of poverty, gender equality, accessibility and security of cities and human settlements.

CONCLUSION

In fact this perspective and the inherent graphs reveal all the architecture underlying the construction of Agenda 2020 then 2030, and the means to implement it, because it is indeed a great building with its foundations, the various elements to construct according to the order of priorities, and the materials to be used to make the whole construction a resilient, stable and sustainable one.

References

- Le Blanc, D (2015). Towards integration at last ? The sustainable development goals as a network of targets. DESA Working Paper No. 141. ST/ESA/2015/DWP/141.
- Lorrain, F. & White, H. C. (1971) *Structural equivalence of individuals in social networks*, Journal of Mathematical Sociology, 1, pp. 49-80
- Marsden, P. V. (1990) *Network data and measurement*, Annual review of Sociology, 16, pp. 435-463.
- Nillsson, M., Griggs, D. & Visbeck M (2016). Map the interactions between Sustainable Development Goals. Nature 534, pp. 320-322.

THANK YOU VERY MUCH FOR YOUR ATTENTION