A WORLD THAT COUNTS – MOBILISING THE DATA REVOLUTION 1
FOR SUSTAINABLE DEVELOPMENT

[Jessie Henshaw Comments:
on the 1st draft report of the UN IEAG on the Data Revolution]

I. GENERAL NOTES

A. Sorry I didn't couldn't immediately respond.

1. *I'd like to have discussion on the papers and comments I submitted*
2. *Sorry I only got making suggestions on the first few pp's*
3. *I had presented parts of a quite different scientific method of using big data,*
   i. *Using "massive cheap data" for "relationship finding" is well worth the trouble*
   ii. *As a guide and complement to "costly data" for accurately measuring progress and returns on investment*

B. Clearly distinguish between "big data" uses

1. *for pre-defined condition indicators*
2. *for discovered behavior and relationship indicators.*

i. Big Data' and the right to human understanding.
ii. Interpreting Big Data Exposing Earth Systems
iii. A World SDG – global accounting of responsibilities for economic impacts
iv. ***3Step process for Working With Nature***

1. A data revolution for sustainable development

1. 1 What is the data revolution?

7 Data are the lifeblood of decision---making, ~~and~~ the raw material for accountability *and the raw material for recognizing how local networks of relationships are responding to change. The value of "big data" is that we can both search for relationships that help us know what the data means in the local and cultural contexts, and also monitor pre-defined objectives and their response to intervention efforts. Without both, of course, problems may not get noticed and efforts fail to take hold*. Without data,
8 we cannot know how many people are born and die; how many men and women still live in
9 poverty; how many children need educating, and how many teachers to train or schools to build;
10 the prevalence and incidence of diseases; if water is polluted or if the fish stocks in the ocean are
11 dangerously low; how many adolescent girls are getting pregnant and what policies are effective in
12 helping them; what companies are trading and whether demand for their product is expanding.
Without data we also can't recognize how these conditions are interconnected within local cultures and systems of economic relationships, or be able to observe their developments as changes in them emerge.

13 To know what we need to know involves a deliberate and systematic effort of finding out. *There may be a great temptation to treat the SDG's as an "engineering problem", driving societies by the*

*numbers, rather than as "development problems" of integrated societal learning, learning from the relationships how they need to prosper in changing. The former tends to assume because there's a goal all the parts automatically know their path, generally not the case, and can actually guarantee failure from the start as an ill-conceived strategy. It generally means studying data for two kinds of information, "relationship finding data" and "condition indicating data". I*n either case it means seeking out high quality information that can be compared over time, between and within countries, and continuing to do so, year after year. It means careful planning, spending money on technical expertise, robust systems, and ever changing technologies. It means building public trust in the data, and expanding people's ability to use it. *The difference in data types may be that "relationship finding data" is collected from available sources, and searched for dynamic indicators of emerging change or for proportional change to indicate coupling, to understand what changes in an environment are connected. "Condition indicating data" is often more expensive as collection methods need to be controlled and systematized, unless in searching "relationship finding data" one discovers quite reliable "found indicators" that can be as good as controlled measures.*

Since 2000, the effort involved in monitoring the Millennium Development Goals (MDGs) has spurred increased investment in just these things, to improve data for monitoring and accountability. As a result, we know much more now about the state of the world and, particularly, the poorest people in it. But despite this significant progress, huge data and knowledge gaps remain about some of the biggest challenges we face, and these gaps limits governments' ability to act and to communicate honestly with the public. Months into the Ebola outbreak, for example, it was still hard to know how many people had died, or where.

And now the stakes are rising. In 2015, the world will embark on an even more ambitious initiative, a new development agenda underpinned by the Sustainable Development Goals (SDGs). Achieving these goals will require integrated action on social, environmental and economic challenges, with a focus on being inclusive and thus ensuring that no one is left behind. This in turn will require another significant increase in the information that is available to governments, civil society, companies and international organisations to plan, monitor and be held accountable for their actions.

Fortunately, this challenge has come together with a huge opportunity. The volume of data in the world is increasing exponentially*, but so are the complications that the work of economies and protecting ecosystem face.* ~~:~~ ~~o~~*O*ne estimate has it that 90% of the data in the world has been created in the last two years. As the graph below demonstrates, the volume of both existing sources of data (represented in the graph by the number of household surveys conducted) and new sources (represented by mobile subscriptions per 100 people) have been rising, as has the openness of data (illustrated by the number of surveys placed on line). *What it means is another problem, as what is surely means is an explosion of new systems and relationships we don't know how to recognize or understand are erupting as the real source of the swelling amounts of data we collect.* Thanks to new technologies, the volume, level of detail, and speed of data available on societies, the economy and the environment is without precedent. Governments, companies, researchers and citizens groups are in a ferment of experimentation, innovation and adaptation to the new world of data. This is the data revolution.

JLH 10/27/14