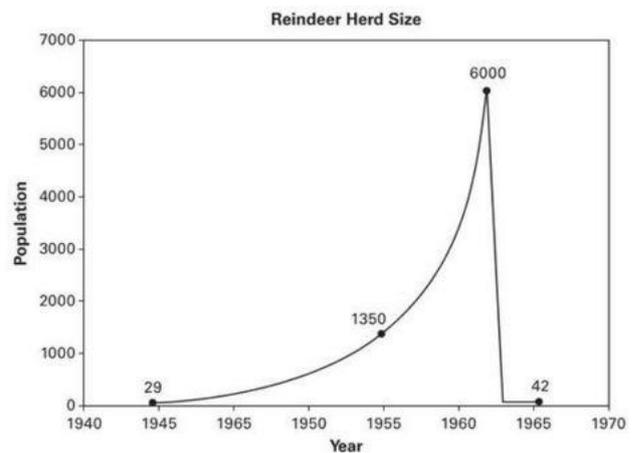## Greening through IT – Chapters 1-4

Environmental issues related to IT subject is a vast and the scope is broad. Bill Tomlinson, through the Greening through IT book explore the different tools and techniques used in the IT, which can be used to help the society in its whole to face some of the environmental issues. He analyses the different kind of influences that the information technologies, and its complex world has on our planet. Tomlinson goes through the theoretical, the technological, and social aspects of the multifaceted environmental issues that are growing more and more. Seeks to provide a framework for thinking about IT systems that address environmental topics and helps people to work more effectively to address the numerous environmental concerns currently facing the planet.

The first chapter starts with a fascinating example of how IT can work, relates to how the fishers in Kerala (southern India) started using mobile phones to communicate with each other and their commercial buyer. This resulted in a complete streamlining of the fishing industry, no more wasted fish, more profits for the fishers and lower prices for the consumer. The main idea of the book is given here, which is to bring together environmental issues and IT and explore the way there are connected to each other. It underlines, that not all the aspects of the IT are environmental supportive, in fact an interest research stated that the IT sector emits CO2 at a rate approximately equivalent to that of the airline industry. Nevertheless, the benefits aspect of IT for the environment are 5 times higher than the negative, therefore innovations in IT can have a strongly positive aspect. Another aspect touched in this chapter is how environmental issues are seen on a larger scale from humans. Environmental issues tend to occur on a larger scales of time, space, and complexity compared to the typical scope of human concerns. Furthermore, is stated that IT on another hand compress time, space, complexity. In fact, IT compress space for example in the field of mobile space allowing fast long distance communication, or by browsing maps of the entire world. The complexity compressed by IT can be seen in the actual PC a device able to perform huge calculations. As a conclusion Green IT works as a bridges from the human scales to the environmental one. A relevant issue, which gives an overall idea of the flow of the book is the HCC (human centred computing) which takes a human approach to the field of IT. Humans are considered to be the most important in developing computer system and therefore, the most important to be considered when dealing with sustainability and computing. In here no humans as a single person is considered but also institutions, associations, organizations, universities which have been created by humans indeed they reflect a human-centred approach but they may have most likely a broader horizon in time, space and complexity when dealing with environmental issues.

In the second chapter a focus on the environmental issues that nowadays humans are dealing with is given. Humans are transforming the hearth, this transformation leads to a situation where is hard for humans and other spices to live. Considering the time scale mentioned in the previous chapter, the author underlines how those changes are not on the time scale of a human day, but obvious if a decade scale is reported. The chapter speaks mostly about the environmental concerns such as the population growth, the waste production, the extinction of the species, and the global climatic changes. An interesting example, regarding the growing of the population is given in the paragraph related, which speaks about reindeer. On an island in Alaska reindeer, for couple of decades, were growing in an exponential way. When the peak was high at a level that all the food on the island was not anymore enough for the entire population, they had a huge mortality. This may happen to the human species due to the fast growing of the population. After discussing about the resource consumption and the waste production by humans the author gives two example of a future scenario of the world. One is really catastrophic, with a pessimistic and a non-environmental view, due the population growth. In fact, accordingly most of our field will be cultivated causing a reduction in biodiversity. Then a parasite will cause a no-production of corn, for example, which mostly is used among the populations and this will cause war and death. The other scenario is to have a more sustainable approach to life with the help of energy stored thanks to solar panel. Then the human life is happier thanks to the abundancy of energy and the mind-approach to recycle.

In the third chapter, human horizons, looks at how we approach, understand and act on the various challenges facing us. It gives a brief discussion to some of the human factors most relevant to ideas of sustainability. The time scale here is an important view of the humans' approach. Humans seem to understand the short-term conditions but hardly understand the time scale of the long-term conditions which environmental issues can have. The chapter starts by saying that selfishness is the key point when explaining what be an animal means hence a human. Humans indeed have a great deal of cognitive and physiological apparatus that supports the effort t survive. There are different theories regarding the biological evolutionary that explain what people care about and so what push people to take environmental approach. This theories, such as the coefficient of relatedness, which says that in case of scarcity humans tend to save for itself and for people whom they care about in fact humans have in this case a narrow horizon of social complexity. Cooperation and conspicuous consumptions

are other theory that helps human is surviving. Then there is the cultural aspect of the human evolution, the education which changes our behaviour faster than how evolution does. In fact, is also thanks to culture if we will tend to consider us as part of nature or the main contributor of problems to nature, instead of viewing nature as something completely separate. Economical and capitalistic aspects are also part of human horizon. Capitalism and corporations have standards which are quite far and not aligned what which is environment. Far because, going into environmental directions causes more expenses as if going in a different direction. Another important aspect of human horizon is education and religion; they play an important role in terms of education toward the environment issues and adapting their mind in a greening direction. Anyway humans develop concern for environmental issues by direct experiences, for example hardly breathing for pollution may be one experience. Not only by direct experiences but also by social support, by sharing ideas emphasizing collective impact.

The fourth chapter, the role of technology discusses the role of technology, especially computing and communication technologies, and the way this knowledge and its associated devices can help or hinder sustainability. Technologies are part of human life, they have helped people adapt better to the environment and of course to develop a human civilization. Nowadays technology, is part of our life, it is still an important issue in order to develop the civilization (here is the most important key for green IT). Apart those kind of benefits, it brings also many negative aspects. The negative aspects, may come from the attitude of the people toward it. Not only from it, also from the bad usage of technologies which cause GHG emission, E-waste, and the use of non-renewable resources. According to the chapter the benefits brought by the technology seems to overcome the negative aspect. Make technology green for example can have a huge impact on CO2 emission in a relative long-term time scale. Green technologies, may provide more information about environmental issues, giving to people a broader view about their environmental impacts. Establishing new ways of thinking and new lifestyles in the society. Help shifting from products to services. So, instead of competing on manufacturing products, they can compete on leveraging quality of services.

Reflection through two interesting videos

Those two videos are really interesting and funny at the same time. The first one other than really funny ("the planet is fine, the planet is fine, the people are fucked." cit.) are really analysing the human attitude towards some issues regarding environmental aspects

https://www.youtube.com/watch?v=7W33HRc1A6c

https://www.youtube.com/watch?v=EbjKcHPmxKQ