A Rhetoric to Climate change Fashion: base of the biomass pyramid is an underestimated carbon sink ; A case study of Toli Pir National Park Azad Kashmir , Pakistan

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Abstract: This writing is an attempt to present few wild ideas, rhetoric to climate change fashion. We discussed the possibility of escaped fertilizers being produced globally and their possible role in capturing atmospheric carbon believing that some factors of climate change are being ignored while other are being over emphasized. Climate change is generally attributed to the increased level of atmospheric carbon dioxide (CO 2) produced by direct/ indirect burning of the fossil fuels and is largely believed to be effect of increased retaliatory hitting back of nature towards excesses of human species in ecosystem exploitation.. Looking at some of the recently reported facts, like, increased values of normalized difference vegetation index (NDVI) and length of deciduous seasons (Varlamova and Solovyev, 2016) this myth needs re-examined. It is believed that carbon sink is mysteriously (or lately discovered) increasing and it constitutes some 35% of the total carbon present in atmospheric air ; ; sometimes mentioned as unknown sink of carbon (Pan et Al., 2011). Nehring (2009) recorded that around 28.3- 36.3 billion metric tons of CO 2 is emitted annually from the fossil fuel burning, which is 50 times more than sink reported by Pan et Al. (2011). Continuous increase of oceanic algae is probably indicative of a similar phenomenon occurring in terrestrial land where vegetation, and of course the forests, are increasing. Carbon, nitrogen and phosphorus are probably driving the overall growth of vegetation at higher pace. Fossil fuel (especially natural gas) is also being used to extract nitrogen in synthesis of fertilizers and around 450 million tons of nitrogen fertilizer is being extracted by Haber process (Smil, 2004; Smith, 2002). Some 1-2% of world's fossil fuel is already being consumed to produce anhydrous ammonia, ammonium nitrate and urea, which can capture 75 trillion tons of carbon emitted which equals to almost 60% of total carbon emitted in the form of CO_2. Of the total nitrogenous fertilizers produced only about 10% is actually required for agriculture and related business, while the rest goes to general environment, including underground and ground water resources Vegetation cover, if not the total forest cover, is at a rise. Biomass accumulation is an ongoing process since life originated on this planet some 3.8 billion years ago. From the first cell to billions of hectares of forest cover this development is going on. Successional changes are a regular process regulating changes in animal and plant communities and their extinctions. However, like the large size animals could not maintain their survival may be the similar factor would replace the large seized plants from forest to smaller sized biomass. We observe increased lichenization of cold desert of Northern areas of Pakistan during the last 20 years, though the changes yet need quantified. Similarly canyons of Plateau (northern Punjab, Pakistan) have started looking greener with emergence of herbs. These can be the first stages of plant succession. Inferring from the above, we are claiming that base of biomass pyramid, receiving good supply as oceanic algal bloom is probably because of the wash away fertilizers from the earth which are resulting into capturing carbon for growth of

vegetation. Probably what we are trying to nudge is that the global climate change studies should also focus on the other aspects rather that totally focusing on carbon dioxide accumulation only. The present study was conducted in Tolipir National Park landscape in Pir Punjal Range of western Himalayas. The study documents 160 plants species 37 tree species, 19 shrubs, 3 epiphytes, 4 climbers, 75 herbs, 10 ferns, 1 moss and 1 lichen with percent cover 96 percent and divided into three major communities (marked with GIS) with scattered human of an average number of houses (350 ± 82.4), with number of individuals per house (10.8 ± 1.1) and fuel consumption per day (43.72±3.30 kg). The preferred fuel wood plant species among inhabitants of the landscape are *Quercus incana*, *Quercus dilatata* (41.2%), *Pinus wallichiana* (21.6%), *Robinia pseudoaccacia* (7.8%), *Machillus odoratissima* (5.9%), *Olea cuspidate* (3.9%), *Ailanthus altissim* (2.0%), *Berberis lyceum* (2.0%), *Abies pindrow* (2.0%), *Machillus odoratissima*(2.0%), *Dodonia viscose* (2.0%), *Punica granatum* (2.0%), *Melia azaderach* (2.0%), *Rubus fruticosus* (14.3%), *Aesculus indica*(13.3%), *Salix acmophylla*(12.3%), and *Dicliptera bupleuroides*(10.2%). The results indicate the Tolipir landscape has significantly greater pressure in the form of fuel wood consumption, population, and grazing when compared to the international standard of other hilly areas.

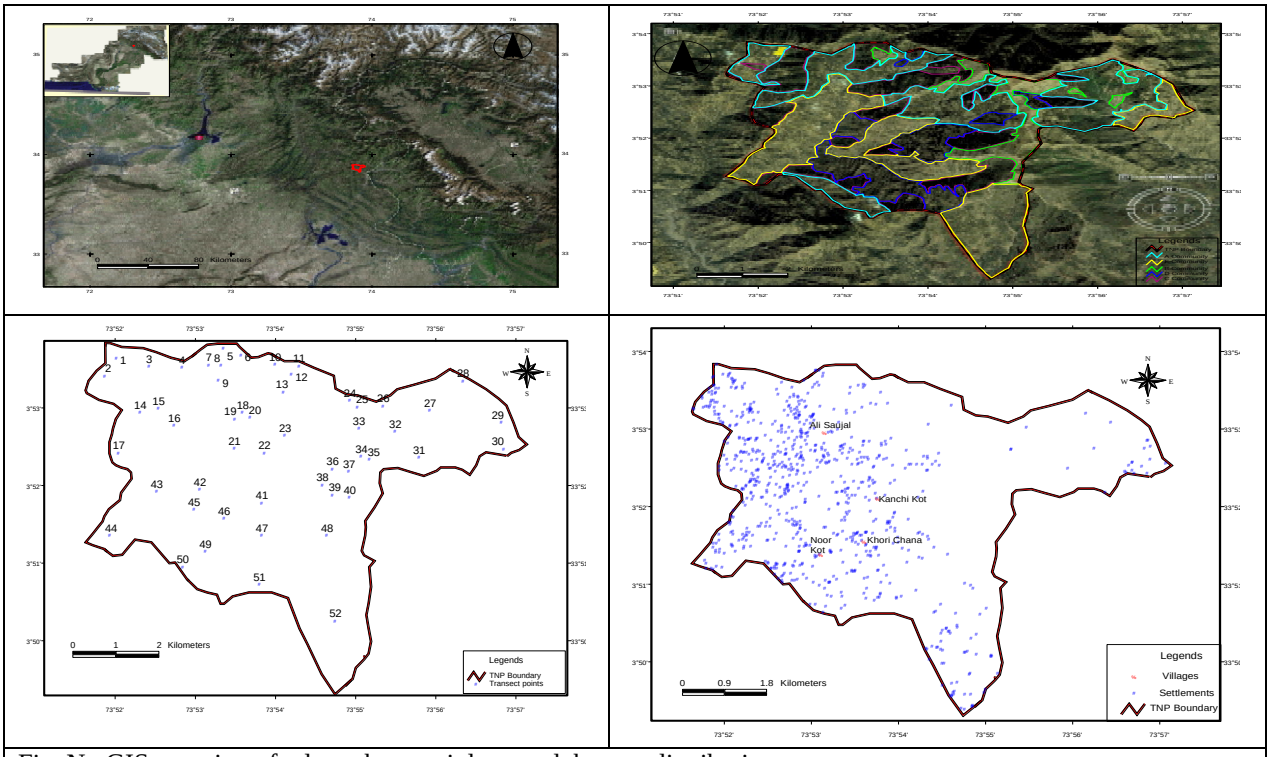

Fig. No.GIS mapping of plant phytosociology and human distribution