**Climate change education, education for regenerative development and the role of the Earth Charter**

**Opinion essay by Eduard Müller**

Most of the recent climate change information being released worldwide indicates a great urgency for change if our current civilization is to survive. What was once debatable doom and gloom information is now underpinned by the most rigorous scientific evidence. Scenarios vary but more and more the worst case ones are proving to be the most probable. Most importantly, climate change is already underway and nature as a whole is being affected with clear consequences for millions of people in every part of the globe. There is currently no place on Earth that does not show clear symptoms of the damage that is being inflicted on Gaia. A majority of Earth’s ecosystems have been affected and species extinction is rising rapidly. This has implications not only for wildlife but also for productive systems as a whole. Food production for a growing population will be, and is already, adversely affected. Water supply is decreasing in many regions at alarming rates. Pollinators are vanishing while pests and invasive species are causing unprecedented harm to food security. Local communities in the Andes are not able to harvest potatoes anymore, after having done it for thousands of years. Coffee production is decreasing rapidly in most areas. Fish stocks are plummeting. Countries are losing more and more crops and food shortages are affecting millions of people, especially the poor. Climate change adaptation and mitigation require that the root causes of global change be addressed and that we move from knowing to doing.

Highly reputable scientists are affirming that critical tipping points have been crossed or are in the verge thereof. The widely endorsed maximum atmospheric CO2 limit of 350ppm (parts per million) was crossed back in 1987. The current global intergovernmental goals of 450ppm will generate irreversible changes in most ecosystems worldwide, accelerated sea level rise, climate disasters, food shortages, spread of disease and more importantly, a widespread loss of life, both human and other. A 450ppm goal is a death sentence for most coral reefs worldwide and could be for the oceans as a whole. Whatever happens with the oceans will have severe consequences for life on land. We urgently need new approaches, policies, and actions to create “counter-tipping points” to balance human development with the natural world.

Nature conservation is not a day to day priority in the minds of the general public. Protected areas are often perceived as luxury sites for tourists and not as the treasury or bank for enormously diverse life, the reservoirs for redistribution of life to a planet when we finally decide to restore its health. Due to our modern urban lifestyles, we have become unattached from our almost navel connection with nature. Conservation organizations have become almost apologetic while the corporate sector has placed itself as the sole ruler of global policy and hence, of society. The refinancing of bankrupt banks, insurance companies and car factories wasn’t really contested by the world’s population, even if their practices can be strongly questioned, especially the ethics of business decisions. These sectors truly believed that they had to be refinanced because their role in society. The oil industry, knowing the effects of burning fossil fuels on atmospheric changes decades ago strongly funded denial scientists and campaigns in the same way the tobacco industry did half a century ago. The reality is that if all of these billions of dollars had been invested in changing the economic model to one that privileged sustainable and equitable development in balance with nature, the long term benefit would have been by far superior; putting the bankrupt car industry back to function will have, on the long run, only contributed to shortening life on earth! We have lost sight that humans cannot live without nature, not only for the provision of food, water and other services but for the sole sake of living; where will we find our future inspiration for living when the oceans are dead, landscapes have been transformed into barren monocultures for the production of biofuels and protected areas have lost their ability to be home for the enormous biodiversity we have today. The image posed to us by Rachel Carson’s Silent Spring many decades ago will be the window to a lonely planet, a far more desolate home for future generations.

Our current focus on consumption as a purpose for living has proven to be life-threatening. Our market-driven economies have not only failed to achieve the promised goals of increasing the quality of life for all but have driven society to a process of rapid self-destruction; human well-being has - in practice - fallen off the agenda. The middle class in many countries, especially developing ones, has dwindled while poverty increases rapidly as do the fortunes of just a few. We are reaching another global record where less than one percent of the population will have more wealth – and under the current model – power than the rest of the close to 7.5 billion people. Happiness is too often related with shopping sprees to satisfy and grow the addiction on consumption. Family or friend outings have moved from outdoors to shopping malls. We have become used to value love and friendship by the number or price of the gifts we give or receive. Society has come to value people for what they have and not for what they are. The bigger the car, the fancier the house and neighborhood, the larger the diamonds and thicker the gold chains, the more admirers we collect.

We have finally reached the most important crossroad in the history of humanity. As the preamble of the Earth Charter states: *“We stand at a critical moment in Earth’s history, a time when humanity must choose its future”*. A couple of decades ago, sustainable development was about leaving future generations, similar conditions to the ones we inherited. Now, it is about all present human beings, irrelevant of age, class or race, being able to make the change which will allow our civilization as a whole to have a future. By now, it will be a different future, but the more we wait to take action, the more people will be vulnerable, the more people will suffer and the whole foundation for our current society will be undermined. As mentioned, climate change is on its way and we already passed the maximum carbon levels in the atmosphere that could have kept the planet as we know it. It will be difficult to guarantee a good future for all seven to nine billion people that are estimated to inhabit this planet in the next few decades.

We are now entering a new era where sustainable development is not any more achievable. We have degraded the planet to such an extent that the capacity for ecosystems to deliver the life supporting services as they have for millions of years are seriously compromised. We need to promote regenerative development which means:

* Functional restoration of **ecosystems** and their services supporting **biodiversity** and allowing for life to continue to thrive throughout the planet.
* A new paradigm for **economic** development where people matter more than markets and money, where entrepreneurship for youth is more important than employment, where economic development is promoted at all levels of society allowing for more opportunities, especially for youth, to achieve better living standards.
* **Social** strengthening which fosters community organization and development to be able to cope with adaptation to climate change and reduce sumptuous consumption patterns.
* Conservation and valuation of living **culture** which is the necessary bond for community life, where local knowledge, values and traditions are shared within family, friends and the community as a whole giving meaning to these terms.
* Rethinking and redesigning current **political structures** so they can reflect true participatory democracy without the influence of money and power and especially fostering long term vision and actions that seek increased livelihoods and happiness and not only gross income.
* And most importantly fostering deep **spiritual and value structures** based on ethics, transparency and global well-being to allow humanity to live in peace with itself and Mother Earth.

Our current institutions have failed to guarantee human well being, equity, and universal access to health, education and even democracy. Educational institutions are not driving the change, at least not with the necessary urgency. We still apply old and traditional methods of teaching instead of adapting to the way children learn and communicate today – the generational gap is growing steadily. Our children are adapting faster to communication technology than the educational institutions. We must work with children to develop effective learning. We must promote horizontal learning and communication and forget about top down approaches. If we want effective education we must learn how to moderate the learning processes. Education today is not about providing information or knowledge. It is about empowering and developing strong attitudes towards life, providing guidance to use these wisely in the constructive process of thinking and action. It is for sure not to promote competition as it has been. The best student is not the one with the best grade, it is actually the one that can be called friend, that will show solidarity with classmates, teachers and society as a whole, the one that recognizes that the community and not the individual needs to be in first place.

True democracy is still not governing the globe. Democracy is not about being allowed to vote; it is about active participation in deciding our common future. Democracy as we know it is often limited to voting and voting is highly dependent on the marketing power of the different parties that allows them to have their promises heard by many, even if many of them stay at that. The more money that is poured into a campaign, the more votes are obtained. No wonder youth is disenchanted and apathetic!

We must re-conceptualize education to base it on holistic approaches where ethics and values are the backbone. In the last decades, information has become readily available at anyone’s fingertips. Youth has to be educated on understanding the global framework and functioning of our civilization and its dependency on a healthy Gaia. They must be trained to find and critically analyze pertinent information and have the tools to generate knowledge by applying this information to their surroundings, local to global. They must be able to make decisions based on collective wellbeing instead of personal interests. They must understand why capital gain must come after natural gain. They must develop systems-thinking and understand the multiple and complex linkages existing between environment, culture, society, economy, policy and spirituality, the six pillars of sustainable development. They must be able to develop a sense of identity, for values to guide their daily lives, for a greater sense of harmony and place for spirituality.

Youth is sensitive, reacting with the heart more than the mind. They still are able to dream, but their dreams are too often linked with goods and not with life experiences. Very few adolescents nowadays actually have a life plan or have thought about life in the future; their vision is immediate as is the need for instant retribution without the concepts of saving and investing for the future. Having the latest electronic gadget or wearing the most popular brands makes it easier to be accepted in their classrooms. In my generation, we waited for weekends to be able to go with the whole family to watch butterflies of many colors and shapes, we competed to find the most bird nests, and we could spend hours floating down rivers on inner tubes, enjoying a picnic while watching the clouds move overhead. Fun after school was about walking in the rain, watching the toads and frogs enjoy. This is now over; our kids spend their Sundays in air conditioned malls, eating junk food while watching ten TV monitors simultaneously, showing, in our case in the South, foreign sports, all in different channels, and all at full volume. If by chance children happen to walk by a park, they can’t hear the birds, only the latest music through their permanently attached earphones that effectively isolate them from reality.

It is not possible for my generation to judge if this reality is a good or bad one, it is just different. It is not a spontaneous evolution; it is the result of very well planed and funded media campaigns driven by corporations that produce “stuff”. These aim at assuring that kids don’t have to think or analyze situations; everything is predigested so that the latest scandal with pop singer turns into the center of their discussions among friends. Schools are not teaching children to think, even less to participate actively in decision-making. The amount of information available today makes it impossible to cover in study plans. Active self learning is difficult; many kids are alienated from their real surroundings, disconnected from nature; many prefer to live within the artificial reality of video games. Many, if not most, are not interested in political parties or current government decisions that may be affecting their future. How come? Well, it would probably take many pages to try to get behind the reasons, which will probably be very diverse and interweaved. Certainly, it is the product of home and community education and culture having been substituted by media, markets and futility. No wonder large corporations can keep them consuming without any critical analysis of what they are prioritizing to achieve their happiness.

The biggest challenge is being able to move our “alienated” youth to make the correct decisions. We must urgently reconnect humans with nature, and with humans! The Earth Charter preamble states, “…*to move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms, we are one human family and one Earth community with a common destiny*.”

This requires a different education, an education that is not based on memorizing things, an education that moves hearts and minds together to embrace change, rapid change. It won’t be an easy task since the future is not a very bright one. Limited opportunities must be overcome with hope and hope must be built up through action by fighting for a better future. We don’t have a whole generation to do this, so this means hard work to change hard to change educational institutions and policy, their directors and teachers and probably parents themselves. It is not a question of isolated successful pilot projects; we need massive processes that get two million clicks of a mouse within half an hour after being posted on the Internet.

The human spirit is indomitable but in order to transform it into the leading inner movement for youth, we need to inspire and empower leaders within the youth. Understanding, feeling and living the Earth Charter is a vast source of inspiration. We must find the way into the educational systems of all countries so they reshape the educational process to set values, ethics, respect and keen analytical thought as core elements of their programs. Only enlightenment, understanding, appreciation and mainly responsibility will move youth to a new state of consciousness.

Youth cannot look at the older generations as role models, as we did throughout history. The lifestyles these pursued are precisely the ones that have gotten us to where we stand, and must be changed. Let’s take jewelry as an example. The lust for gold and diamonds has accompanied humans for millennia. The difference is that now we are consuming industrial quantities of them, mined mostly by leaving open wounds on Earth’s surface in detriment of local communities. In the case of gold, this goes along with the application of dangerous chemicals that have harmed the health and lives of many. Most mothers wear and crave gold and diamonds, probably out of ignorance of how they are mined or coupled with denial. On the other hand, fathers are dreaming of high horsepower vehicles, if possible four-wheel-drive ones, even if they are only used to commute to a downtown office every day. Mass media, especially TV, is constantly evoking everybody to have the latest model of the latest gadget, even if the older ones are still perfectly functioning. How will children change the consumption patterns if their parents do not?

All of this leads us to great and unprecedented challenges. Change requires effort, sacrifice and will. Under current conditions, change will have to come from the people, not the governments, not the institutions. However we don’t have the time to wait until the new generations start making the decisions. We must have changes in behavior in all human beings, be it for mitigation, adaptation or risk management related to climate change. This means that we must endeavor into broad based educational and training programs. It is highly relevant that changes in individual behavior lead to collective change that will incorporate mass media and the corporate sector, governments and all sectors of society. This has been true since the last decades of the 20th century, but achievements have been limited. Nevertheless, current climate change gives us a new opportunity. Everybody is feeling climate change and many are actually being affected. This gives us access to people that are now sensitized and finally interested in what is happening. With a little knowledge we can push them into action.

The Earth Charter has proven capable of moving people with different backgrounds, nationalities and age groups. It relates to everybody, thus making it possible to feel and to understand and not only read o listen. Only by moving individuals, especially by empowering leaders that can induce changes at smaller, community based scales, will we be able to get to collective change. We must move from individuality to communality, strengthening values, between friends, family and all people that surround us. Politicians will only react to votes. Corporations will only react to the market. If people are aware of what is good and what is bad and are empowered enough to take action, they will tell the corporations what to produce and the politicians how to act. Our world is lead by multinationals that seek profit and governments measuring development based on gross domestic product. Technology is looked upon for solutions even if it will only provide responses for the symptoms of our equivocal development model. The cure will only come if we can go to the roots of the problem and rid our civilization from greed, ego and the craving of power. Cosmetic answers are the wrong answers!

We must revert our current trends quickly, seeking equity, education, food, health and happiness for all human beings. We must value life as the sole reason of existence. The only way forward is by promoting a world ethic of universal responsibility; the best inspiration to doing this is the Earth Charter.