

editors Robert Costanza, Olman Segura and Juan Martinez-
Alier Washington DC: Island Press

Meadows, Donella H. "Envisioning a Sustainable World." is
online:
www.sustainer.org/pubs/Envisioning.DMeadows.pdf (accessed
10/06/2009)

It is a must read document; it explains best what Donella
Meadows' "visioning" is.

Meadows, Donella H., Jorgen Randers and Dennis Meadows
2004 *Limits to Growth: The 30-Year Update*.
White River Junction, VT: Chelsea Green Publishing
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A synopsis of *Limits to Growth: The 30-Year Update*. Online at
the Sustainability Institute (founded by Donella Meadows): [http://
www.sustainer.org/pubs/limitstogrowth.pdf](http://www.sustainer.org/pubs/limitstogrowth.pdf) (accessed
10/06/2009)

The *Systems Thinker*--"Moving Toward a Sustainable Future."
includes chapter 8 from *Limits to Growth: The 30-Year Update*
<http://www.thesystemsthinker.com/V16N9.pdf> (accessed
10/06/2009)

Senge, Peter M.

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FINIS

Universal Platform for

Developing Sustainable Earth Vision Co-operatively.
(draft--updated, at times, online: <http://www.ModelEarth.Org/seed.html>)

"A sustainable world can never be fully realized until it is
widely envisioned. The vision must be built up by many
people before it is complete and compelling." (Meadows
2004, p273)

"You never change things by fighting the existing reality. To
change something, build a new model that makes the
existing model obsolete"*

(attributed to **Buckminster Fuller**, though I have not been able,
so far, to find the source)

We have to know what kind of a world we want to live in, if the
one that we live in now we don't like.

The challenge is to come up with an idea of a world that would
optimally suit us all; an ideal that all of us on Earth could focus
on and strive for--a harmonious, truly sustainable co-existence of
us all on Earth.

It has to be an ideal accessible, discussable, and amendable by
every- and any-body at all times--the germ of a true global (and,
of course local at the same time) governance--a government
where the governing would be done by the means of a "vision"¹
in common worked on, held and striven for by all continuously.

The valid competition would be to improve on the ideal , and to
find better ways of achieving this ideal, instead of competing for
advantage over others to the detriment of the whole, as has the

prevalent practice been till now.

There would, eventually, cease any need for "leaders" and "followers"--everyone would have the potential to take a part in embodying their own ideas (in concert with the wishes for an ideal existence of all others) in the continuously being shaped collective vision. The resulting collective vision would not be static--an ideal could not remain an ideal without the possibility of improving on it perpetually. It would be a space to resolve any differences, controversies, conflicts, and any complaints that there ever might arise among us; it would become a superior way of a collective self-rule.

What is being referred to in the quote at the beginning of the article--the "envisioning" and "vision" of the ideal to be realized--are indeed essential for achieving that which is being desired:

"... Vision without action is useless. But action without vision is directionless and feeble. Vision is absolutely necessary to guide and motivate. ..."

(Meadows 2004, p272).

The vision, indeed, " ... must be built up by many people before it is complete and compelling. ..."--But how to do this? How to allow a vast number of people (potentially all who live on Earth and have a stake in the future of this world, each perhaps with their own vision) to co-operate on creating one vision of one Earth's future?

This mind staggering task might stop many from even ever contemplating such an undertaking--an assumption validated by the lack of any progress in presenting a platform on which to

civilization.

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Meadows, Donella H.

1996 "Envisioning a Sustainable World." (written for the Third Biennial Meeting of the International Society for Ecological Economics, October 24-28, 1994, San Jose, Costa Rica) In *Getting Down to Earth, 1996 Practical Applications of Ecological Economics*

The obvious solution to this conundrum would be to ensure that instead of a home to be an expensive privilege, to have a home, no matter how humble a home, should become a thing necessary for people to have in order to be able to function well in the society. In short--instead of a source of stress, a home should become a source of comfort, a place to where one goes to become well.

The most expedient way to make sure that a home becomes a secure and a sustainable foundation of the society would be to change only one thing: the right to sleep, to rest, and to be able to take a basic care of one's basic necessities would have to be introduced into the constitution as an inalienable right; No more, and no less.

To constitutionalize all the basic things that are necessary for a satisfactory quality of life as basic rights would alone ensure an organic unfolding of all necessary adjustments in the social fabric. An unfolding into a profound and lasting relief that would be felt all across the globe.

People need land to live on, to have their homes on. The surface of Earth is a valuable and also a limited resource. A resource that is too valuable to let any irrational, fickle commercial interests to be in charge of. Land is precious, it has to be managed intelligently--all kinds of life, not only humans, need it for living; An unnecessary stress, felt by all directly and indirectly, is caused by the gross mismanagement of land that is currently in existence--a stress that we hardly can allow to exist, especially in times of ecological and social crises that we are faced with these days.

A good stress-free home (one's castle indeed!) should be the basis of any truly civilized society, regardless whether the times are good or bad. At home is where culture is being continuously re-created. If there, at home, is any lack what-so-ever, it will affect the whole of the

unite all of the possible visions of a sustainable Earth ever since Donella Meadows' passing away (2001).

Despite Donella Meadows' "visioning"/"envisioning" being taught at many places in the world, the one thing needed for starting to work on a to all acceptable future--a place where all could relate their ideas with the ideas of everyone else--is missing. Where is it that anyone could compare their vision with the visions of others?

On a local level it might be possible (even though it is not done properly anywhere, to my knowledge--correct me, please, if you know otherwise), but how about co-ordinating all the local visions with the vision for the whole world?

There is, possibly, a way that would allow to accommodate all of our visions globally, but, only as long as we can all agree that we all want to live *truly* and *provably* sustainably.

Consider this:

Imagine an Earth where humans exist in zero population growth communities situated amidst wild, by humans unregulated nature, where all the other species that we share this planet with live untroubled by humans.

These communities could exist at what-so-ever level of complexity of sustainability (from "hunter-gatherer" way of life to anything more complex), as long as those communities would be transparently and demonstrably sustainable, so that their way of living would not adversely affect the existence of other human communities and other life on Earth.

The basis of this "platform" for developing a vision that would encompass all possible sustainable life-styles would be an Earth populated by hunter-gatherers who would have a more than

ample room to live in, with a plenty of safety margin that would allow for any, even now unforeseeable exigencies. In this way there would be no need for having to accommodate all other species sharing the Earth with us in any special way--those would always live in balance with humans who would not be able to inflict much damage on them.

Any communities at a level of sustainability more complex than that of hunter-gatherers within this universal vision would be "evolved" from the least complex one possible step by step, demonstrating that each more complex level of sustainability would indeed be sustainable ecologically and socially in every aspect, all communities together making sure not to exceed the total population level of humans on Earth that would always remain fixed at what it would be if all humans lived as hunter-gatherers--this as a safety measure in case that people, if not satisfied with higher complexity level of sustainability, would always have the opportunity to fall back to living at less complex levels of sustainability.

I imagine that people (both--in constructing the vision, and in the sustainable world that would be the vision realized) would be able to "vote with their feet"--at any time when they would feel that they would like to live, either at a different place, or at a different level of sustainability, they would just re-group/re-locate. In this way social sustainability would be ensured--no one would be *forced* to stay at any place, or at any level of complexity of sustainability.

It must not be understood that I advocate that all the billions of people on Earth that there are now should become hunter-gatherers and then tried to work their way to the level of complexity of sustainability that they would like to live at in real

Home: The Very "Leverage Point".¹

online: www.modelearth.org/leverage.html

The most obvious place where a meaningful intervention would start a profound change for better in the whole world is the basic unit of any community--a home. It is at home where we grow up and learn the basics of living as humans; it is where we should go to get well, to rest and to recuperate; it is at home where we get ready, time after time, to interact with the world outside our home. However, the "home" of today is very different from what it ideally ought to be.

A "home" today is an indicator of our social system's dysfunctionality (note 2) .Consider this: It is obvious to everyone that humans need to rest, to sleep, to take care of their basic needs to be able to function well within the society. To take care of all these essential needs should, of course, be done at home. Everyone knows that to be homeless is to be avoided at all costs. Yet it is commonly accepted as a good thing when prices of homes go up and thus homes become less available. Logically, rationally this does not make any sense!

As a result of this the society as a whole suffers. A "home", as we know it today, is frequently a source of discomfort, anxieties, a source of existential stress, and this results in a plethora of societal ills that plague the whole society.

People who don't have a proper home are more likely to suffer from lack of rest, sleep, from financial worries (about finding a good home, about having to pay the rent, mortgages, taxes...); They, due to this stress, are more likely to engage in criminal activities, they are more likely to become physically and mentally affected, and generally the unavailability of a good home to most members of the society creates stress that ultimately permeates all parts of the society.

accident, but if we fail, we take it as an omen. That sets up a positive feedback loop spiraling downward. The less we try, the less we achieve. The less we achieve, the less we try. Without vision, says the Bible, the people perish.

However, while it might be incomparably easier to decide on personal goals to achieve, or to get a small group to agree on what the preferred commonly shared existence (as in the quote above), the challenge in the case setting a goal for a favorable future of a whole planet is the need to unify coherently *all* the individual visions for a good, optimal future (developed to what-ever degree) of all who share and of all who will share the Earth!

Endnote3:

The best way to see that a very few people can describe an ideal world that they would like to live in is to ask them. Usually they would tell you at a great length about what they don't want to have in such an ideal world, but when it comes to describing what they would like to have in it, the difficulty becomes apparent.

Endnote4:

Margaret Mead with Gregory Bateson were at the beginnings of developing "Cybernetics" (Norbert Wiener) and "systems theory" (Jay Wright Forrester, Donella Meadows).

life! All this above would be happening in models (of any appropriate kind, e. g. "gedanken experiments, etc.) for the purposes of getting a practicable "vision" together.

The what-so-ever model(s)/vision(s) that would be arrived at should not be anything less than a portrayal of an as *perfect* as possible situation. (However--"visions" should never be considered as being static; they would evolve along with the evolution of thoughts on the subject.) The model(s) arrived at should not be impeded by what might be considered possible, or impossible, in our current, very imperfect world that we are forced to live in now:

"Visioning means imagining, at first generally and then with increasing specificity, what you really want. That is, what you really want, not what someone has taught you to want, and not what you have learned to be willing to settle for. Visioning means taking off the constraints of "feasibility," of disbelief and past disappointments, and letting your mind dwell upon its most noble, uplifting, treasured dreams." (Meadows 2004, p272)

The ideal should not be limited by what might be thought of as being "possible", or "impossible" at any given time! "... In order to conceive of what you truly want to create, you must separate what you want from what you think is possible. ..." (Fritz 1984, p71)

The ways of achieving the ideal depicted in the "visions"/"universal models" should start suggesting themselves as soon as the model would appear to be practicable enough.

A great number of variations on this "vision" suggest themselves--the result would still be a humanity that would harmoniously exist with itself and all other life on Earth, *providing* that humanity would adhere strictly to the "zero population growth" policy, and to living demonstrably and transparently sustainably.

A way of providing a satisfactory definition of "sustainable"/"sustainably" would be to demonstrate transparently in models (of any appropriate kind) that any situation would, or would not, indeed be "sustainable", that at no point there is anything that would be deleterious to the comfort of other humans or other species.

There is a need for such a model of what the Earth should ideally look like that would be freely accessible by anyone on Earth, so that everyone can, at any point, see what progress is being made towards the ideal at any time, so that there is a reference available for any undertaking that might concern the welfare of anyone on the planet.

"Model" - definitions:

"... 10. a simplified representation of a system or phenomenon, as in the sciences or economics, with any hypotheses required to describe the system or explain the phenomenon, often mathematically."

<http://dictionary.reference.com/browse/model>

A representation of a system that allows for investigation of the properties of the system and, in some cases, prediction of future outcomes. Models are often used in quantitative analysis and technical analysis, and sometimes also used in fundamental

and I don't want to be one.

After we got those objections out of our systems, some deeper ones came up. One person said, with emotion, that he couldn't stand the pain of thinking about the world he really wanted, when he was so aware of the world's present state. The gap between what he longed for and what he knew or expected was too great for him to bear. And finally another person said what may have come closer to the truth than any of our other rationalizations: "I have a vision, but it would make me feel childish and vulnerable to say it out loud. I don't know you all well enough to do this."

That remark struck me so hard that I have been thinking about it ever since. Why is it that we can share our cynicism, complaints, and frustrations without hesitation with perfect strangers, but we can't share our dreams? How did we arrive at a culture that constantly, almost automatically, ridicules visionaries? Whose idea of reality forces us to "be realistic?" When were we taught, and by whom, to suppress our visions?

Whatever the answers to those questions, the consequences of a culture of cynicism are tragic. If we can't speak of our real desires, we can only marshal information, models, and implementation toward what we think we can get, not toward what we really want. We only half-try. We don't reach farther than the lengths of our arms. If, in working for modest goals, we fall short of them, for whatever reason, we reign in our expectations still further and try for even less. In a culture of cynicism, if we exceed our goals, we take it as an unrepeatable

world be like if there were no hunger?" Surely each of these people had a motivating vision of the goal he or she was working for. It would be interesting to hear and collect these visions and to see if they varied by discipline, by nationality, or by personal experience.

I thought this exercise would take about an hour and would help the participants get to know each other better. So I opened the first workshop by asking, "What is your vision of a world without hunger?" Coached by Peter, I made the request strongly visionary. I asked people to describe not the world they thought they could achieve, or the world they were willing to settle for, but the world they truly wanted.

What I got was an angry reaction. The participants refused. They said that was a stupid and dangerous question. Here are some of their comments:

- Visions are fantasies, they don't change anything. Talking about them is a waste of time. We don't need to talk about what the end of hunger will be like, we need to talk about how to get there.
- We all know what it's like not to be hungry. What's important to talk about is how terrible it is to be hungry,
- I never really thought about it. I'm not sure what the world would be like without hunger, and I don't see why I need to know.
- Stop being unrealistic. There will always be hunger. We can decrease it, but we can never eliminate it.
- You have to be careful with visions. They can be dangerous. Hitler had a vision. I don't trust visionaries

analysis.

www.investorwords.com/5662/model.html

Note (1):

The "vision" in the title harks back to Donella Meadows' "visioning"/"envisioning", which owes its being to Robert Fritz's "Technologies For Creating" (TFC). What "visioning"/"envisioning" is for Donella Meadows, Robert Fritz calls a "choice". Fritz' *The Path of Least Resistance* (Fritz 1984) is a necessary reading for anyone who wants to understand what Donella Meadows' "visioning"/"envisioning" is. I think that "model" could be a more fortuitous choice of a term in the context of this writing.

Donella Meadows' "Envisioning a Sustainable World", in which she explains what "visioning"/"envisioning" is, is online:

www.sustainer.org/pubs/Envisioning.DMeadows.pdf

and so is what I wrote that touches on what her "visioning"/"envisioning" concept is:

"Visioning": Global Citizens Designing a Sustainable World Together -

www.modeearth.org/donella-vision.html.

In *Limits to Growth: The 30-Year Update* the authors write about the "sustainable revolution", the next biggest social change coming. (Meadows, et al. 2004, chapter 8, p273)

The "Universal Platform for Developing Sustainable Earth Vision" is a basis for a complete, all-encompassing vision of a sustainable Earth; Complete, because *any* sustainable life-style can be accommodated within the model, as long as that "life-style" indeed is provably sustainable.

What is needed now is to make this all-encompassing vision of a sustainable Earth "compelling".

*) copied from <http://www.siberg.net/2009/09/buckminster/>

You might also, perhaps, look at what I wrote about R. B. Fuller's "World Game" -

[Buckminster R. Fuller's World Game and ModelEarth.](#)

Donella Meadows' "Visioning": Global Citizens Designing a Sustainable World Together.

online: www.ModelEarth.Org

There is a need for expediency--we find ourselves already on the downslope that comes after the set of exponential curves (representing the exploitation of resources, ability of the planet to heal itself, and the growth of population) starts indicating the downward crash-course, according to the *Limits to Growth: The 30-Year Update* (Meadows 2004), the Global Footprint Network (Global Footprint Network 2009), and many other authorities on the subject. We are *increasingly* using more of resources than can be supplied by our planet and are overtaxing our planet's self-healing capacities. We are in a state of emergency. The "crash", that is so obviously coming, would be unprecedented in magnitude in human history, if we let it happen. A great many horrible scenarios are presenting themselves, but there are no good scenarios in which the Earth is saved at the end. (I might be wrong, but where are they? I know that there are many good actions undertaken for lessening the burden, but I have to

Dennis Meadows *The Limits to Growth* (Meadows 1972), *Beyond the Limits* (Meadows 1992), and *Limits to Growth: The 30-Year Update* (Meadows 2004), and wrote "[Envisioning a Sustainable World](#)" 1994 (these are only a few of her writings from among many others). [Back to text](#)

Endnote2:

The approach, which Donella Meadows calls "envisioning" and/or "visioning", is a part of "Technologies For Creating" (TFC), pioneered by Robert Fritz (Fritz 1984) is described in *The Path of Least Resistance*, (Fritz 1984) and is based on a common-sense notion that one cannot really ever get, achieve anything, unless one knows, as well as possible, what that something that one wants to get is. The best to show how difficult it is to get people to imagine what there *should* be in an ideal situation instead of listing everything that should *not* be there, please see a quote from Donella Meadows' "Envisioning a Sustainable World" (Meadows 1996):

A World Without Hunger

About ten years ago I ran a series of workshops intended to figure out how to end hunger. The participants were some of the world's best nutritionists, agronomists, 2 economists, demographers, ecologists, and field workers in development -- people who were devoting their lives in one way or another to ending hunger.

Peter Senge of MIT, a colleague who helped design and carry out the workshops, suggested that we open each one by asking the assembled experts, "What would the

for by all of us.

It would mean that all our differences, controversies, conflicts, and complains would be resolved in models with much less waste of lives, resources, and time, instead of resolving those in real life and, at the same, time creating new problems, as the practice is today.

It would not be necessary that all people from the whole world would have to start modeling an ideal world together at first. At first it would be sufficient that the modeling would be started, if only by a handful of people (Margaret Mead: "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."(4). But--the modeling process would have to be accessible to anyone who would want to do so also! The whole process would be entirely transparent, entirely honest, non-hierarchical, no top-down at all; the process would have to be so clear that learning it would be an organic process for anyone--from the simpler elements to more complexity gradually and at everybody's own speed, learning that that the learner would have to know, would like to know in order to be able to contribute the modeling process sufficiently informed (please see "[The Ideal Sustainable Earth Model: Proposal](http://www.modelearth.org/ideal.html)." - online: www.modelearth.org/ideal.html).

This concept of unifying of individual ideas of what our common existence on this planet could be used also for resolving conflicts--it would eventually become an ideal grass-root government that would put our current way of doing politics out of business entirely. Please see [Designing a Lasting World Peace Together](http://www.modelearth.org/peace.html). - www.modelearth.org/peace.html

Endnote1:

Donella Meadows co-authored together with Jorgen Randers and

yet see a detailed good scenario, in which we all survive in a better shape than the one we are in now, presented anywhere.)

In our current situation we have many well founded reasons to be alarmed; any reasons to be optimistic about our prospects on this planet are not founded on any rational grounds.

Our situation is not hopeless; all the ills that plague the Earth now are individually possible to deal with. We have all the knowledge and resources for to deal with each of our exigencies and problems. But it is difficult to deal with *all* of them at *once* and also in such a manner that one remedy would not ever undo the effects of any other appropriate remedies. To imagine the combined effect of all the remedies, to see what the whole picture would look like after all of the remedies have run their course, is not practiced to any extend yet.

This is where a great deal of hopelessness, confusion, and cynicism about our collective fate stems from. We have *no* assurance that our efforts will ever achieve any lasting desirable results (what should "desirable" results look like anyhow?), all we have is a hope that our "stabs" at improvement might somehow (mostly we don't know how) help.

We have to enter the crash zone as a fully sustainable humanity--the sooner we become truly sustainable, the better for us. The longer we continue applying sporadic, disjointed, ineffectual remedies without any clear idea what it exactly is that we want to achieve by applying those, the less able we will be to deal with what is coming to us. Some humans might survive, but in no shape that we would still recognize as "human" (except, perhaps, anatomically).

It is very important to know what this "fully sustainable humanity" should look like so that we know what it is that we need to do in order to become such a "fully sustainable humanity" that would be able to

deal with the coming and already existing exigencies. Without becoming truly sustainable we don't stand a chance. We could never hope to prevent the "crash" *and* to heal the planet while still continuing our unsavory non-sustainable societal and environmental practices.

The authors of *Limits to Growth: The 30-Year Update* (**Meadows 2004**) think that the next revolution will be the "sustainable revolution", and that it will happen "organically", and that it cannot be planned--a point I, the author of this article, would like to dispute! I think that this "sustainable revolution" *has* to, indeed, happen organically, but that it has to be very deliberately *designed*!. We *have* to know what it is that we want to achieve with our efforts! We have to know what it is that we want to achieve with this "sustainable revolution"!

Otherwise the very needed "sustainable revolution" will not happen at all, although it should already be in a full swing, considering that we, according to the data available from many sources, are already on the downward vital curves slope.

This "sustainable revolution" will happen only if we bring it into being very deliberately, using a concerted effort. The "deadline" in this case cannot kept on being extended indefinitely. There is no more time left to rely on "hit or miss" methods used in real time/space--every step of this revolution has to be "hit or miss" tested in models instead, in order to avoid *any* waste of time and energy in real time/space (not to mention loss of many lives--both human and non-human!). There is no more time to merely hope that all the well meant good sustainable deeds and good sustainable trends that there are being exercised now will (somehow, but we don't quite know how exactly, or even roughly) result in a sustainable humanity.

Donella Meadows(1) (1941 - 2001), well known to all serious environmentalists, was one of the very few environmentalists who realized that it is not enough just to want to improve on things in order

our differences in models? It would not be necessary that everybody would have to take a part in modeling; this could be started with a few people from each opposing sides of any conflict currently underway on Earth (be it a ideological, or even an armed conflict), to start presenting rational, defensible resolutions to any problems. No personalities (that are so "necessary" in today's political process) would be needed--only ideas themselves would be entering the modeling process.

The model of an ideal world (ours) would be based on real hard data, on all that we know about this world and all life in it. The existence of computer games that depict entire worlds for, so far, entertainment purposes only, shows that the same, or similar approach could be used for designing an Earth where humankind's existence could be shown at its optimum.

It would not matter what means for modeling would be used as long as the means used would serve the purpose. On a local community level (where everybody knows everybody else well) discussions and finding out what what all members of the community wish for a happy life are would, perhaps, be a good start. But still--all the "visionings" made in all local communities would have to be all synchronized globally in order to see how all local sustainable communities would get along on the global scale. For this there hardly could be a better tool than the Internet where it would be possible to have a by all accessible interactive model of an ideal Earth.

In order to bring Donella Meadow's efforts to a fruitful completion, which could not be anything else but for humankind to become truly sustainable, the idea of "visioning" has to be introduced into the "sustainable movement" on a full scale, and all our various visions of what a sustainable Earth ought to be have to be synchronized and unified into a single, comprehensive design that then could be striven

the possible implication of this approach, more on this is contained in this booklet, and at [.www.ModelEarth.Org](http://www.ModelEarth.Org)

By using modeling it would be easier to introduce into such an ensuing "portrayal" notions of ecological and social sustainability; This, also, could be a way of "...test[ing] our models and learn[ing] where they are right and wrong..."--done by unifying and vetting all of these ideas in models, by finding out in models what ideas are more "sustainable" than others, using all the available knowledge that we have of ecological and societal processes to determine the merit of the ideas inputted. Although everybody would have the access to the interactive modeling process, it would never be personalities that would determine the process; it would always be ideas that would be vetted on the basis of their merit alone. Politics would become a true science where popularity contests between personalities would cease to matter.

The purpose of such "global unification" of the great variety of any ideas pertaining to human society and the global environmental concerns would not be any other than coming up with a single global model of what a sustainable Earth should be, its being a single model because one Earth can only have one sustainable future at a time, and striving for various different models in real life/time is a waste of time, lives, and resources, since all the differences among all the various ideas would have to be reconciled by trial and error method in real life/time anyhow!--we do not have much time left to be able to do that; we have to expedite this process by modeling. The modeling process in the end would be no more (but not less) than a tool that would take the horrendously wasteful and very inefficient way of finding out whether an idea is good or not out of testing the idea in real life, and do exactly the same--finding out how good an idea is--in models! Why settle our differences on battle fields, if we can resolve

to overcome the horrendous environmental and social crisis that humanity is facing presently. She knew that it was important that we have a vision of how the world we would like to live in should look like in order for our efforts to be successful in averting, in mollifying the effects of the "crash" that is to follow our having reached the limits of being able to punish ourselves and our planet without experiencing any repercussions sooner or later. For this see her "Envisioning a Sustainable World" (**Meadows 1994**), and the chapter 8 of *Limits to Growth: The 30-Year Update* (**Meadows 2004**) in which the need for "visioning" is described.

It was Peter Senge (author of *The Fifth Discipline: The Art and Practice of the Learning Organization* 1990) who introduced Donella Meadows to Robert Fritz's "Technologies for Creating" (TFC) from where Donella Meadows learned of the need for, what she calls, "visioning" (or "envisioning" at times(1). Robert Fritz's "Technologies for Creating" is best explained in Robert Fritz's *The Path of Least Resistance* (Fritz 1984)--a "must" reading for anyone who wants to understand Donella Meadows' "visioning".

Donella Meadows' "visioning" gets misunderstood because "visioning" requires a bit more than mere intellectual understanding; it takes a while for the ramifications to "sink in" despite its being a very simple idea that says that we cannot get what we don't know what that, that we want to get, is. We have to first know what it is that we want, and only then we stand a chance of, maybe, obtaining it. There is nothing at all "visionary" about this. "Visioning" is not anything handed down to us--we have to generate our visions ourselves. To paraphrase Robert Fritz: instead of reacting to outside (relative to ourselves) conditions, we set our goals ourselves according to what we really want (not that we might feel that we should be wanting), and start working towards what we ourselves decided that we really want.

Donella Meadows writes at the end of the subchapter of chapter 8 of *Limits to Growth: The 30-Year Update* (Meadows 2004) titled "Truth-Telling":

"All the models, including the ones in our heads, are a little right, much too simple, and mostly wrong. How do we proceed in such a way as to test our models and learn where they are right and wrong? How do we speak to each other as fellow modelers with an appropriate mixture of scepticism and respect?..."

Donella Meadows died prematurely, and, as far as I know, did not pursue the matter of "...test[ing] our models and learn[ing] where they are right and wrong..." to a conclusion. (I would like to be wrong on this--please let me know whether there are any sources that I should be aware of.)

I, myself have run into this myself, if by a very different route; From wanting to live self-sufficiently, through wanting to be sustainable, to the recognition that a single family, not even a single community can ever make it to remain sustainable in a world that would swallow up such an entity without a hesitation! Naturally the whole world has to become sustainable in order for humans to survive without a shame!

I assume that this is the same with many other people who decided that to live sustainably is an intelligent way of existing on this planet for humans--while this decision might be easy for individuals, those individuals might start realizing that unless the whole of humanity becomes ecologically and socially sustainable, one's own living so makes little, if any, impact on the overall quality of life on Earth;

The problem becomes two-fold: 1) How to reconcile the different notions that there are about what "sustainability" is? 2) How to convince a decisive portion of humanity that to live sustainably is an intelligent way of existence?

When one surveys the sustainability movement, it becomes apparent (as it did to Donella Meadows) that although there is a lot of commotion about becoming sustainable, there are a very few people who would have an idea what a sustainable world should look like, because it is more common to hear about what people would not like to have in their realities, rather than what their ideal realities should look like. (note 3)

IMPORTANT:

Things would be simple if everybody on Earth would like to live sustainably. The wide variety of what people understand under the term "sustainable" could be accommodated in one sustainable Earth model, providing, those ideas would indeed be provably sustainable--i.e.: it would be possible to demonstrate in models that they indeed are sustainable. Please see "Universal Platform for Developing Sustainable Earth "Vision" Co-operatively." - www.modelearth.org/seed.html .

But--since not everyone on Earth desires to live sustainably, a different way of arriving at the whole of humanity living on Earth sustainably has to be devised:

It may be safely assumed that most people are reasonable enough to see that resolving of any differences, controversies, and complains--such as there might be among all on Earth--might be immensely easier if done in models, rather than in real life where it causes a great deal of waste of lives, resources, and time. All that would have to be done would be to want for all those reasonable people to arrive at a portrayal of an Earth that would offer the optimal conditions for life for all. This could be done by modeling of any appropriate kind.

It would be beyond and above the scope of this writing to describe all