

An Overview of the 2012 UNCSD's Development Choice Dilemmas: Pointing Out the Structure and Implications of the Paradigm Flip in Practice Since then From Green Market Thinking to Dwarf Green Market Thinking.

By

Lucio Muñoz*

* Independent Qualitative Comparative Researcher / Consultant, Vancouver, BC, Canada Email: munoz@interchange.ubc.ca

Abstract

When “Our Common Future” report was published in 1987 a set of sustainable development approaches came along following the different school of development thought line, all aiming at providing from their angle the best way to go beyond the economy as usual model, and addressing once and for all social and/or environmental issues associated with traditional economic activity. The Brundtland Commission highlighted that the traditional economy needed to reflect social and environmental considerations to make it consistent with sustainable development needs. Then, the United Nations Rio + 20 conference came in 2012(UNCSD) still facing the same key development choice dilemmas raised by the Brundtland commission on how to go forward in development terms, where it was decided a) to focus our attention on environmental concerns only, and b) that the green market school of thoughts was the way to go to address the eco-economic issues of the day.

However, the green markets that were eyed in theory to address the environmental externalities of doing business in 2012 were never established. The practice today 2019 shows that the green market idea was flipped towards a dwarf green market idea, where production and consumption are no longer free choices. The goals of this article are a) to provide a general overview of the development choice dilemmas the UNCSD conference was facing in 2012; b) to highlight the structure of the green market development choice made; and c) to describe the flip in practice since then from green market thoughts to dwarf green market thoughts as well as the implications of this flip.

Introduction

When “Our Common Future” report was published in 1987 a set of sustainable development approaches came along following the different school of development thought line, all aiming at providing from their angle the best way to go beyond the economy as usual model, and addressing once and for all social and/or environmental issues associated with traditional economic activity. The Brundtland Commission highlighted that the traditional economy needed to reflect social and environmental considerations(WCED 1987) to make it consistent with sustainable development needs. Then, the United Nations the Rio + 20 conference came in 2012(UNCSD 2012a; 2012b) still facing the same key development choice dilemmas raised by the Brundtland commission on how to go forward in development terms, where it was decided a) to focus our attention on environmental concerns only, and b) that the green market school of thoughts was the way to go to address the eco-economic issues of the day.

However, the green markets that were eyed in theory to address the environmental externalities of doing business in 2012 were never established. The practice today 2019 shows

that the green market idea was flipped towards a dwarf green market idea, where production and consumption are no longer free choices.

Goals of this paper

The goals of this article are a) to provide a general overview of the development choice dilemmas the UNCSO conference was facing in 2012; b) to highlight the structure of the green market development choice made; and c) to describe the flip in practice since then from green market thoughts to dwarf green market thoughts as well as the implications of this flip.

Methodology

First, the terminology and operational concepts used in this paper are shared. Second, the different development choice dilemmas the UNCSO conference was facing in 2012 are highlighted graphically and analytically. Third, the structure of each possible shift away from traditional market thinking, towards sustainability markets, towards red markets and towards green markets and related implications are shared as well as it is indicated that the option chosen was a shift towards green markets. Fourth, the structure of the paradigm flip from green market thinking to dwarf green market thinking is pointed out. Fourth, the nature of dwarf green market and that of green markets is compared to stress that dwarf green markets work like green markets in reverse. And finally, some food for thoughts and conclusions are advanced.

Terminology

S = Sustainability market	SP = Sustainability price
SQ = Sustainability quantity	TM = Traditional market
TMP = P = Traditional market price	Q = Traditional market quantity
RM = Red market	RMP = RP = Red market price
RQ = Red market quantity	GM = Green market
GMP = GP = Green market price	GQ = Green market quantity
DM = Dwarf market	DMP = DWP = Dwarf market price
DMQ = Dwarf market quantity	DGM = Dwarf green market
DGMP = DP = Dwarf green market price	DGMQ = Dwarf green market quantity
SM = Social margin	EM = Environmental margin
DWM = Dwarf margin	SSG = Social sustainability gap

ESG = Environmental sustainability gap D = Demand
TMS = Traditional market supply SMS = Sustainability market supply
RMS = Red market supply GMS = Green market supply
DGMS = Dwarf green market supply GI = Government intervention
NGI = No government intervention DWGM = Dwarf green margin

Operational concepts

- 1) **Sustainability market**, *the socially and environmentally friendly market.*
- 2) **Sustainability price**, *the price that clears the sustainability market.*
- 3) **Sustainability quantity**, *the quantity produced and consumed in the sustainability market.*
- 4) **Traditional market**, *the economy only market.*
- 5) **Traditional market price**, *the price that clears the traditional market.*
- 6) **Traditional market quantity**, *the quantity produced and consumed in the traditional market.*
- 7) **Red market**, *the socially friendly market.*
- 8) **Red market price**, *the price that clears the red market.*
- 9) **Red market quantity**, *the quantity produced and consumed in the red market.*
- 10) **Green market**, *the environmentally friendly market.*
- 11) **Green market price**, *the price that clears the green market.*
- 12) **Green market quantity**, *the quantity produced and consumed in green markets.*
- 13) **Dwarf market**, *it looks like a specific market, but it is not.*
- 14) **Dwarf market price**, *the price at which dwarf production and consumption take place.*
- 15) **Dwarf market quantity**, *the quantity produced and consumed in dwarf markets.*

- 16) Dwarf green market**, *it looks like a green market, but it is not.*
- 17) Dwarf green market price**, *the price at which dwarf green production and consumption take place.*
- 18) Dwarf green market quantity**, *the quantity produced and consumed in dwarf green markets.*
- 19) Social margin**, *the cost of making business activity socially friendly.*
- 20) Environmental margin**, *the cost of making business activity environmentally friendly.*
- 21) Dwarf margin**, *the cost imposed or set by external actors on business activity to contract dwarf production and consumption behavior, it could be social, economic, and environmental.*
- 22) Dwarf green margin**, *the environmental cost imposed or set by external actors on business activity to contract dwarf green production and consumption behavior.*
- 23) Social sustainability gap**, *the gap created when assuming social externality neutrality.*
- 24) Environmental sustainability gap**, *the gap created when assuming environmental externality neutrality.*
- 25) Economic sustainability gap**, *the gap created when assuming economic externality neutrality.*

An overview of the development dilemmas the UNCSD conference was facing in 2012 Rio plus 20

If you look at the traditional market of Adam Smith(TM) from the point of view of the sustainability market theory(S)(Muñoz 2012) and sustainability gap theory(Muñoz 2019) you can see that it has two sustainability paradigm gaps, a social sustainability gap(SSG) and an environmental sustainability gap(ESG), that make it unsustainable in those terms just as the Brundtland commission pointed out, a situation that can be stated graphically as in Figure 1 below:

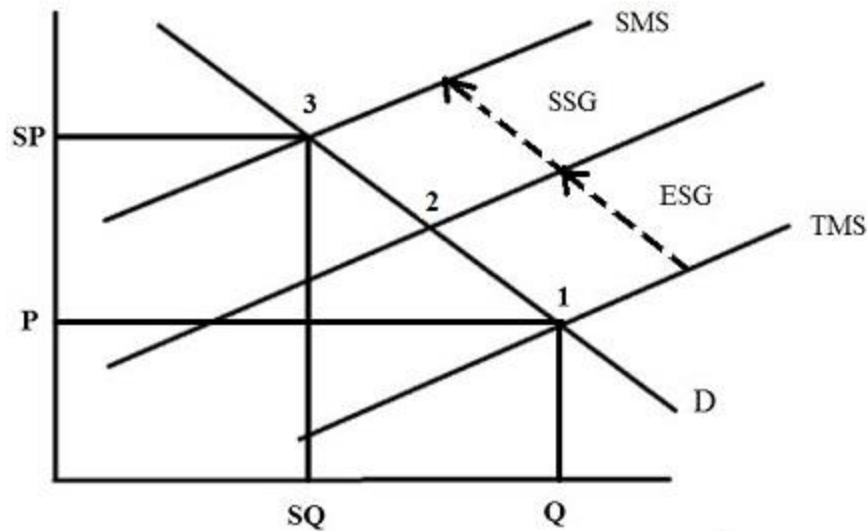


Figure 1 The sustainability gaps affecting the traditional market model(TM) of Adam Smith

We can appreciate based on Figure 1 above the fixing development choice dilemmas the UNCSO conference had to consider in 2012 to go beyond the economic world as usual as there are two sustainability gaps between the sustainability market(S) at point 3 and the traditional market(TM) at point 1 as indicated by the broken arrows. Therefore, the conference had the following three clear options or choices to aim at fixing the traditional market model(TM): i) to close both sustainability gaps at the same time(SSG and ESG) and shift towards sustainability markets or socially and environmentally friendly markets(S); ii) to close only the social sustainability gap(SSG) and shift towards socially friendly markets or red markets(RM); and iii) to close only the environmental sustainability gap(ESG) and shift to green markets or environmentally friendly markets(GM).

Notice, the sustainability price(SP) is greater than the traditional market price P($SP > P$) because the sustainability price(SP) reflects both the social cost(SM) and environmental cost(EM) associated with production, and the traditional price(P) does not, hence $SP = P + EM + SM > P$.

The option of going with sustainability markets or towards socially and environmentally friendly markets

If the UNCSO conference would have decided that we needed to close both social and environmental externalities by internalizing social(SM) and environmental(EM) cost associated with economic activity at the same time, then the structure of the shift from traditional market(TM) to sustainability markets(S) would have looked as in Figure 2 below:

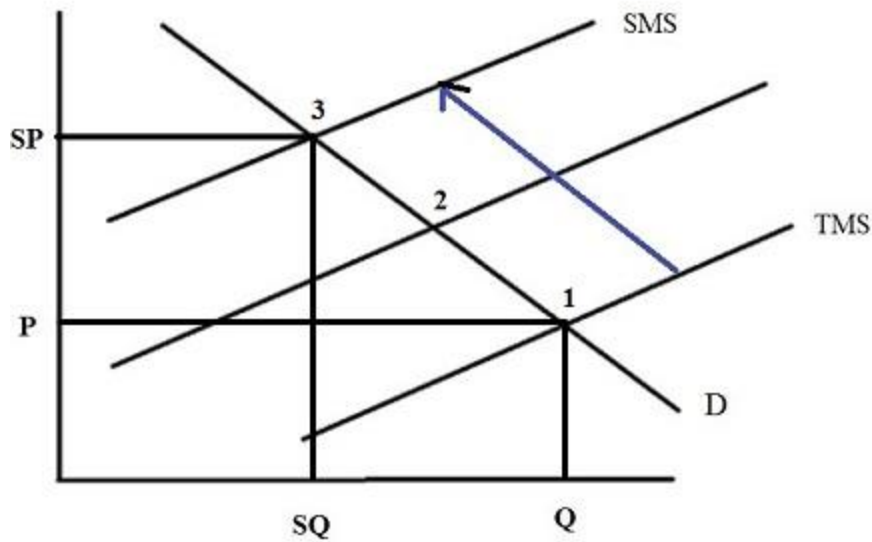


Figure 2 The shift from the traditional market(TM) to the sustainability market(SM) after fully closing social(SSG) and environmental(ESG) sustainability gaps.

Notice the following in Figure 2 above: a) when both sustainability gaps are closed at the same time the traditional market(TM) shifts up to the left from point 1 to point 3 as indicated by the blue arrow, and it takes the form of a sustainability market(S), which is cleared by the sustainability market price(SP); b) at point 1 we have an independent choice as in this model only the economy matters, at point 3 we have a full codependence choice as now all components, the economy, society and the environment, matter; c) the optimal sustainability quantity(SQ) produced and consumed is less than the optimal quantity(Q) in traditional markets, $SQ < Q$ as $SP = P + EM + SM > P$; and d) there are no sustainability gaps($SG = 0$) in sustainability markets.

See that the socially and environmentally friendly structure in Figure 2 above can be seen as the structure of socially and environmentally friendly capitalism or red-green capitalism.

The option of going red or towards perfect red markets

If the UNCSO conference would have decided that we needed to close only social externalities by internalizing only the social cost(SM) associated with economic activity, then the structure of the shift from traditional market(TM) to socially friendly markets or red markets(RM) would have looked like in Figure 3 below:

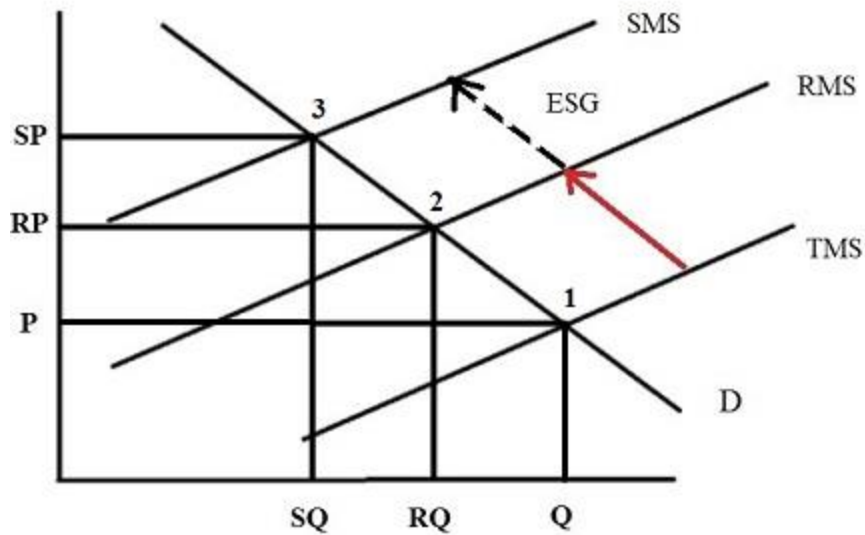


Figure 3 The shift from the traditional market(TM) to the socially friendly market or red markets(RM) after fully closing social sustainability gaps(SSG).

We can say the following based on in Figure 3 above: a) when only the social sustainability gap(SSG) is closed the traditional market(TM) shifts up to the left from point 1 to point 2 as indicated by the red arrow, and it takes the form of a red market or socially friendly market(RM), which is cleared by the red market price(RP); b) at point 1 we have an independent choice as only the economy matters, at point 2 we have now a partial codependence choice as in this model both the economy and society matter; and c) the optimal red quantity(RQ) produced and consumed is less than the optimal quantity(Q) in traditional markets, $RQ < Q$ as $RP = P + SM > P$; and d) there is an environmental sustainability gap(ESG) in red markets(RM) from point 2 to point 3 as they assume environmental externality neutrality.

Notice that the socially friendly structure in Figure 3 above can be seen as the structure of socially friendly capitalism or red capitalism.

The option of going green or towards perfect green markets

Since the UNCSO conference decided that we needed to close only the environmental externalities by internalizing only the environmental cost(EM) associated with economic activity, then the structure of the shift from traditional market(TM) to environmentally friendly markets or green markets(GM) would have looked as in Figure 4 below:

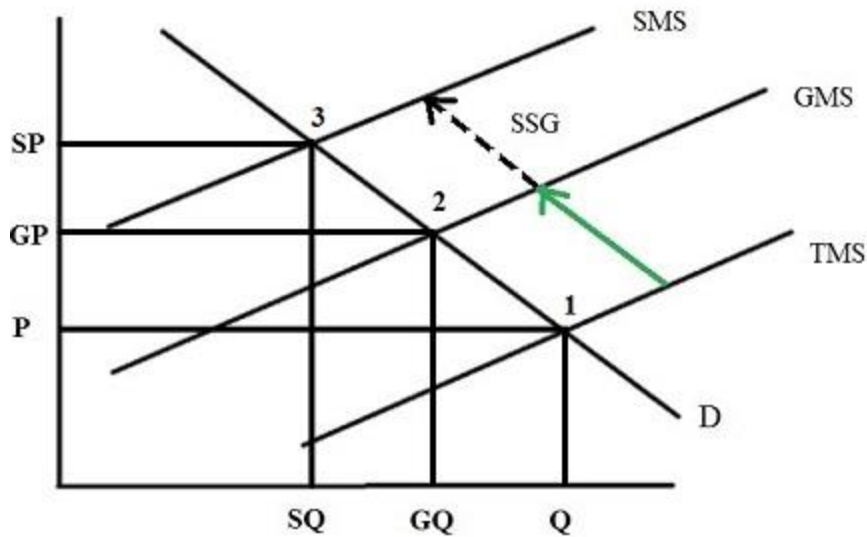


Figure 4 The shift from the traditional market(TM) to the green market(GM) after fully closing environmental sustainability gaps(ESG),

We can observe the following based on in Figure 4 above: a) when only the environmental sustainability gap(ESG) is closed the traditional market(TM) shifts up to the left from point 1 to point 2 as indicated by the green arrow, and it takes the form of a green market or environmentally friendly market(GM), which is cleared by the green market price(GP); b) at point 1 we have an independent choice as only the economy matters, at point 2 we have now a partial codependence choice as in this model both the economy and environment matter; and c) the optimal green quantity(GQ) produced and consumed is less that the optimal quantity(Q) in traditional markets, $GQ < Q$ as $GP = P + EM > P$; and d) there is a social sustainability gap(SSG) in green markets(GM) from point 2 to point 3 as they assume social externality neutrality.

See that the environmentally friendly structure in Figure 4 above can be seen as the structure of environmentally friendly capitalism or green capitalism.

The flipping from green market thinking to dwarf green market thinking

While in theory the 2012 shift chosen by the UNCSO conference was a shift from perfect free traditional market theory(TM) to perfect free green market theory(GM) to address environmental issues, in practice there has been a flipped to non-free dwarf green market theory(DGM) as a way of dealing with environmental externalities outside perfect free-market thinking, a flip highlighted in Figure 5 below:

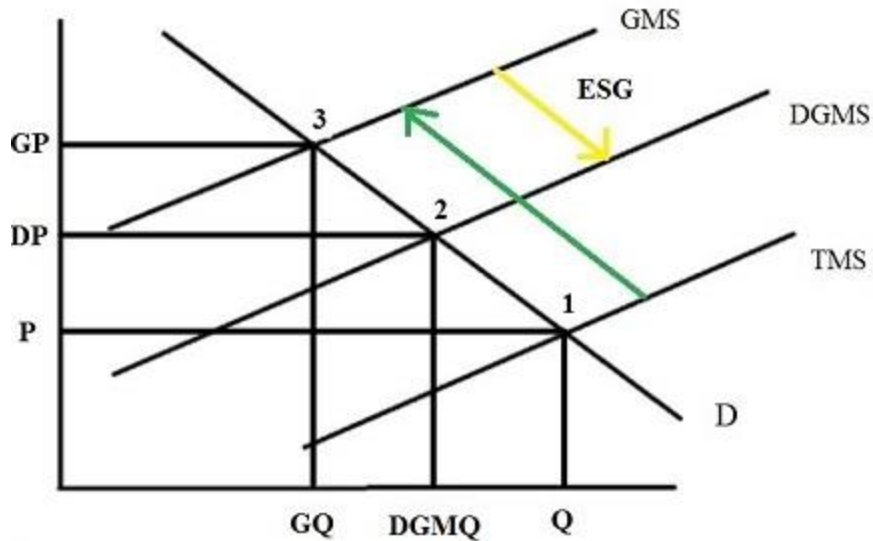


Figure 5 The flip in practice from green market thinking(GM) to dwarf green market thinking(DGM) due to external market price intervention

We can highlight the following using Figure 5 above: a) In theory we moved in 2012 from traditional markets(TM) at point 1 to green markets(GM) at point 3 as indicated by the green arrow, but in practice we flipped back to point 2 as shown by the yellow arrow, and to the world of dwarf green markets(DGM); b) at point 3 there are no environmental sustainability gaps($ESG = 0$) while at point 2 there is an environmental sustainability gap($ESG > 0$) created by the flip since the green market price(GP) is greater than the dwarf green market price(DP) since the pollution cost or dwarf margin(DWM) set by external factors is less than the environmental margin(EM), $GP = P + EM > DP = P + DWM$ as $EM > DWM$; and c) at point 3 the free market demand and supply determine the optimal quantity to be produced and consumed while at point 2 we have non-free market forces determining production and consumption levels as external factors determine the size of the environmental cost margin or of the cost of pollution(DWM) that firms must pass to consumers as well as subsequent pollution cost increases to contract dwarf production and consumption as desired.

Hence, dwarf green markets are not fully environmentally friendly as just as in green market they are affected by a social sustainability gap(SSG) as dwarf green markets too assume social externality neutrality.

Comparing the nature of green markets with that of dwarf green markets to point out relevant implications

Green markets and dwarf green markets work in opposite ways, a situation depicted in Figure 6 below:

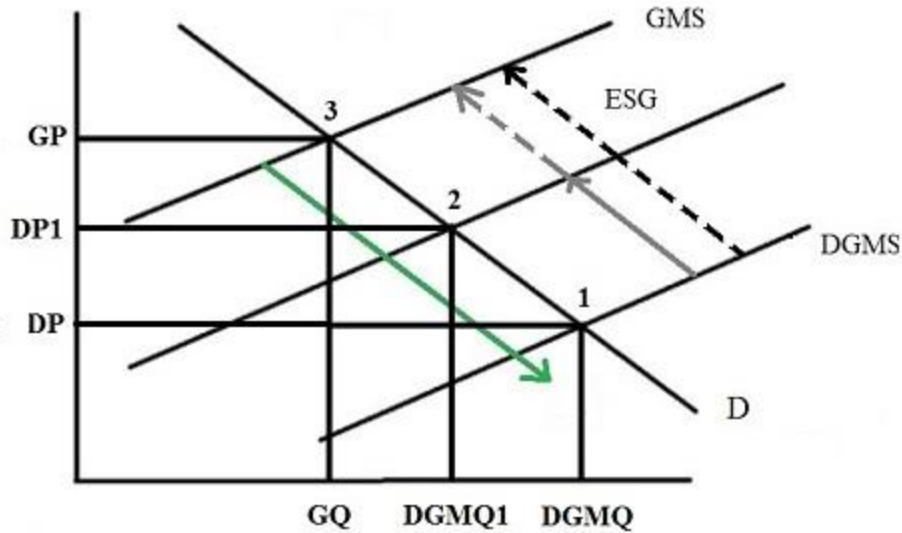


Figure 6 Comparing the structure of green markets(GM) and of dwarf green markets(DGM) to highlight key implications

The main observations we can make based on Figure 6 above about green markets are: a) They work from left to right as indicated by the direction of the green arrow starting at the green market supply(GMS) at point 3 as they aim at producing green goods and services at the lowest green price possible, making pollution reduction profitable for firms and beneficial to consumers as that reduces production and consumption cost of green goods and services through time; b) They are free markets and do not need government intervention; and c) they operate under no environmental sustainability gap($ESG = 0$) pressures as the environmental cost of doing business(EM) is fully internalized in the pricing mechanism of the market.

The main aspect that can be stressed based on Figure 6 above about dwarf green markets are: a) They work from right to left as indicated by the direction of the brown arrow starting at the dwarf green market supply(DGMS) at point 1 heading towards point 3 as they aim at contracting the production of goods and services by setting, and then methodologically increasing pollution costs to firms to be passed to consumers, which means increasing production and consumption costs through time without an incentive to produce less polluting goods and services at lower prices for consumers to enjoy; b) They are non-free markets and they need permanent government intervention to exist; c) they operate under environmental sustainability gap($ESG > 0$) pressures as the environmental cost of doing business is not fully reflected in the pricing mechanism of the dwarf green market($DWM < EM$); and d) they have a sustainable section of production and consumption from point 1 to point 2 as indicated by the continuous section of the brown arrow as this represents the area of pollution cost increases forced by the external factor that firms are able to pass to consumers and consumers are willing to pay; and they have an unsustainable section of production and consumption from point 2 to point 3 as indicated by the broken part of the brown arrow as this indicates the area of pollution cost increases that consumers are not willing to take, and therefore, they are cost increases that firms are not able to pass to consumers, leading to a dwarf green market crash. In other words, pollutions cost set that bring prices in dwarf green markets that fall from point 1 to point 2 are points of consumption and production that can be sustained, but prices that fall between point 2 and point 3 would lead to a market crash.

Hence the main implications of the discussion above is that the working of dwarf green markets can be extracted if we flip fully our understanding of how perfect green markets do work in theory and in practice as summarized in Figure 6 above. In other words, flipping free-market theory and practice leads to dwarf green market theory and practice.

Food for thoughts

a) Can the accumulation of social deficits lead to paradigm shift towards socially friendly capitalism? I think yes, what do you think?; b) Are dwarf green markets at the mercy of a consumer's willingness to pay brown line?. I think yes, what do you think?; and c) Is the use of dwarf green markets to deal with environmental concerns a violation of the theory-practice consistency principle? I think yes, what do you think?

Conclusions

It was pointed out analytically and graphically that the three development choice dilemmas the UNCSO conference was facing in 2012 were to shift towards sustainability markets, to shift towards red markets, and to shift towards green markets. It was highlighted that the UNCSO conference decided that the best way to go in 2012 was to shift traditional market and economic thinking towards green market and green economy thinking.

However, it was indicated that in practice non-green market and non-green economy thinking are being used to address environmental impacts, which means that in practice there has been a flipping of free-market thinking. And the implication of this flipping is that dwarf green markets work in the opposite way as how green markets do as they are not aimed at making pollutions reduction profitable for firms and beneficial to consumers, they are just aimed at pollution reduction through market production and consumption contractions.

References

Muñoz, Lucio, 2012. **Complex and Man-Made Markets: Are We Currently Approaching Sustainability in a Backward and More Chaotic Way in Terms of Economic Thinking?**, In: *The Mother Pelican Journal*, Vol. 8, No. 8, August, Ed. Luis Gutierrez, PhD, USA.

Muñoz Lucio, 2019. **Paradigm Evolution and Sustainability Thinking: Using a Sustainability Inversegram to State Paradigm Death and Shift Expectations Under Win-Win and No Win-Win Situations.** In: *Current Perspective to Economics and Management* , Vol. 1, Chapter 2, June 12, Book Publisher International, London, UK.

United Nations Conference on Sustainable Development (UNCSO), 2012a. **Rio+20 Concludes with Big Package of Commitments for Action and Agreement by World Leaders on Path for a Sustainable Future**, Press Release, June 20-22, New York, NY, USA.

United Nations Conference on Sustainable Development (UNCSO), 2012b. **The Future We Want, June 20-22**, New York, NY, USA.

World Commission on Environment and Development (WCED), 1987. *Our Common Future*, Oxford University Press, Oxford, UK.