The Future of Carbon Market and its impact on Business

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Abstract

The Carbon market is now the one of the fastest market in India. The companies that are not already carbon constrained will need to prepare themselves for carbon legislation as a low carbon economy in the long run. This research is used for the future of carbon market and its impact on business. Some companies are already taken lots of monetary and non-monetary benefits but nowadays several organizations are directly interested to involve in this trading.

This concept is basically generated from the Kyoto Protocol. The main aim of this protocol is to reduce the carbon emission. This concept is mainly coined and operated on the basis of Clean Development Mechanism (CDM), which is used to earn carbon credit earnings and carbon trading between the various companies and the central government. The Kyoto Protocol mechanism is basically the only internationally agreed mechanism for regulating the carbon credit activities and includes checks for additionality and overall effectiveness. It’s supporting organization, the Union Nations Framework Convention on Climate Change

(UNFCC), is the only organization with a global mandate on the overall effectiveness of emission control systems.

A global carbon market could be a system where all major emitters and industrialized countries are carbon constrained domestically and developing countries provide offsets on a large scale through efficient market mechanisms. So, this research is basically used to show the future of carbon credit trading in the developing countries and its impact on the business of various organizations.

Keyword: Carbon Credit Trading, Kyoto Protocol, Clean Development Mechanism (CDM), Green House Gases.

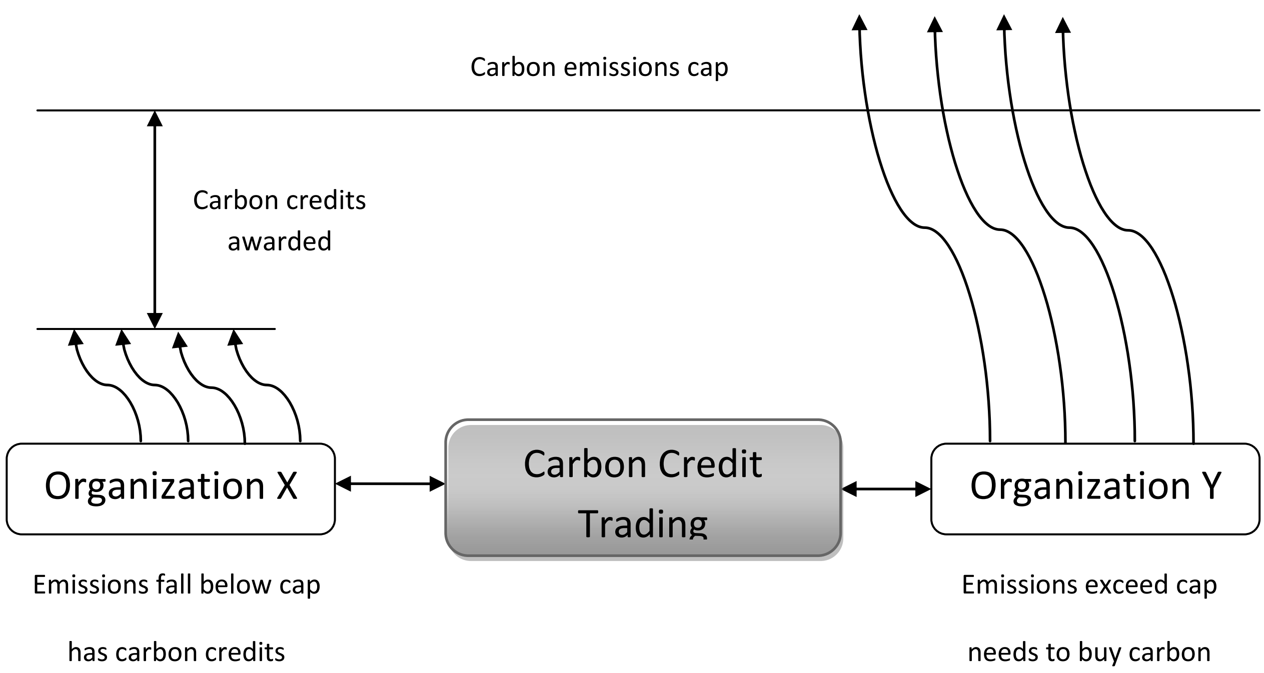
INTRODUCTION

The Carbon Credit Trading is a concept which is used to aid in regulation of the amount of gases that are being released into the air. Several plans have been created in an effort to reduce global warming. The plan works by capping the amount of total emissions that can be released by one company. If there is a shortfall in the amount of gases that are used, there is a monetary value assigned to this shortfall and it may be traded. These credits are often traded between businesses. These credits are already bought and sold in international markets.

CARBON CREDITS AND THEIR TRADING

Carbon credits as a concept was discussed and formalized in the Kyoto Protocol. In December 1997, the third Conference of Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) adopted the Kyoto Protocol. The protocol requires developed and developing countries to limit their Green House Gas (GHG) emissions to individual targets. A very novel idea of carbon credits came in to practice with the objective of achieving quantified emission limitation through specific policies and measures to minimize the adverse effects of climate change. The Kyoto Protocol has created a mechanism under which countries that have been emitting more carbon and other greenhouse gases have voluntarily decided that they will bring down the level of carbon emissions to the levels of early nineties. The protocol provides for developed countries commitment to quantitative emission reduction targets, while developing countries with the opportunity of their participation to mitigate emissions through the ***Clean Development Mechanism (***CDM). The Protocol agreed 'caps' or quotas on the maximum amount of GHG emission for developed and developing countries. In turn these countries set quotas on the emission of installations run by local business and other organizations, generally termed 'operators'. The countries manage this through their own national registries, which are required to be validated and monitored for compliance by the ***UNFCCC***. Each operator has an allowance of credits where each unit gives the owner the right to emit **one metric ton of carbon dioxide or other equivalent greenhouse gas**. Operators that have not used up their quota can sell their unused allowance as carbon credits, privately or in the open market. By permitting allowance to be bought and sold, an operator can seek out the most cost effective way of reducing its emissions, either by investing in cleaner technology and practices or by purchasing emissions from other operator who already has excess capacity.

Fig. 1: How carbon credit trading works?



Based on: "The Carbon Market – The Essential Guide" by Tim Morris, 2008

Carbon credits are a key component of national and international emission trading scheme. They provide a way to reduce green house effect emissions on an industrial scale by capping the total annual emissions and letting the market assign a monetary value to any shortfall through trading. Credits can be exchanged between businesses or bought in international markets at the prevailing market price. The basic concept is as shown in figure 1.

There are many organizations that sell carbon credits to commercial and individual customers who are interested in lowering their carbon footprints as per their countries environment regulations. These carbons off setters purchase the credits from an investment fund or a carbon development company that has aggregated the credits from its projects. In reality most of the transactions are not performed by the national governments directly but by the operators who have been set quotas by their respective country.

CLEAN DEVELOPMENT MECHANISMS(CDMS)

While generating GHG statements a country complying with the Kyoto Protocol, which has its Carbon Credits left, may transfer to developed countries or countries which might not be able to meet up its standards, towards meeting their targets under Kyoto Protocol. CDMs address providing alternative technological options and incentives to developing countries, to pursue their socio-economic goals but with lesser climate change impacts.

The operational mechanism of CDMs involves an investment by a legal entity from a country that has adopted binding emissions targets according to the Kyoto Protocol in a project of a country which does not have that limits of binding emissions, which results in emission reductions. The investment decision would include an agreement between the two parties and their respective countries on the dispensation and transfer of the emission reductions resulting from the project. These emission reductions have to be certified by an appropriate authority (the CDM Executive Board, provided for under the protocol) and then these certified Emission reductions (CERs, commonly known as carbon credits).

INDIAN INDUSTRY

India has generated approximately 30 million carbon credits and approximately 140 million in run, the second highest transacted volumes in the world. India's carbon market is growing faster than even information technology, bio technology and BPO sectors as 850 projects with a huge investment of Rs 650,000 million are in pipeline. As per the Prime Minister's council on climate change, the revenue from 200 projects is estimated at Rs. 97 billion till 2013. India has been able to register approximately 350 projects spread across various sectors with major dominance of renewable energy, energy efficiency and biomass energy projects. Carbon, like any other commodity, has begun to be traded on India's Multi Commodity Exchange (MCX) and has become first exchange in Asia to trade carbon credits.

There are some Indian industries that are used in carbon credit trading are as follows:

- Automobile
- Chemicals
- Food and beverages
- Petroleum products
- Basic metals
- Textiles
- Electrical and mechanical machinery and equipment
- Transport equipment
- Fabricated metal products
- Communication equipment
- Furniture
- Rubber and plastic products
- Leather products
- Electricity generation
- Construction

RESEARCH OBJECTIVES

The various research objectives of this research are as follows:

- To explore the ways in which more organizations in particular and citizens in general could be made aware of the concept of carbon credits.
- To encourage the concerned manufacturing industries /organizations to create and earn carbon credits.
- To give the effective suggestions for improving the current situation of carbon trading in India and also identify the various carbon trading opportunities in India.

RESEARCH METHODOLOGY

The research methodology of this research is as follows in table 1:

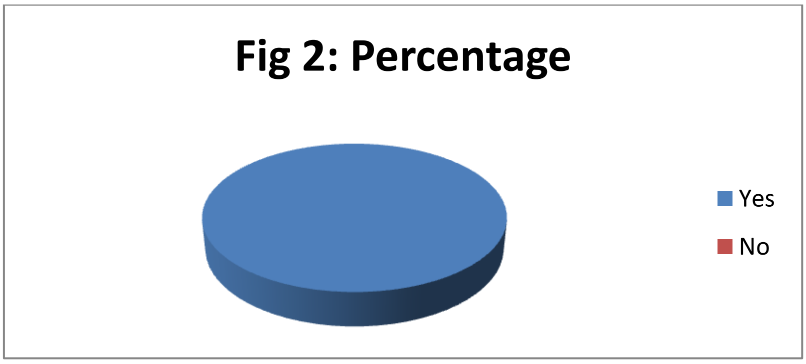
Table 1 Research Methodology

S.No.	Particulars	Data
1	Survey Area	Northern and Western India
2	Sample Size	20
3	Sample Unit	Organizations
4	Type of Research	Analytical & Descriptive Research
5	Sampling Type	Convenient and Random Sampling
6	Research Tool	Questionnaire
7	Data Type	Primary & Secondary Data

DATA ANALYSIS

Q1. Are you aware with Carbon Credits Trading?

S. No.	Response	No. of Responses	Percentage
A	Yes	20/20	100
B	No	0/20	0

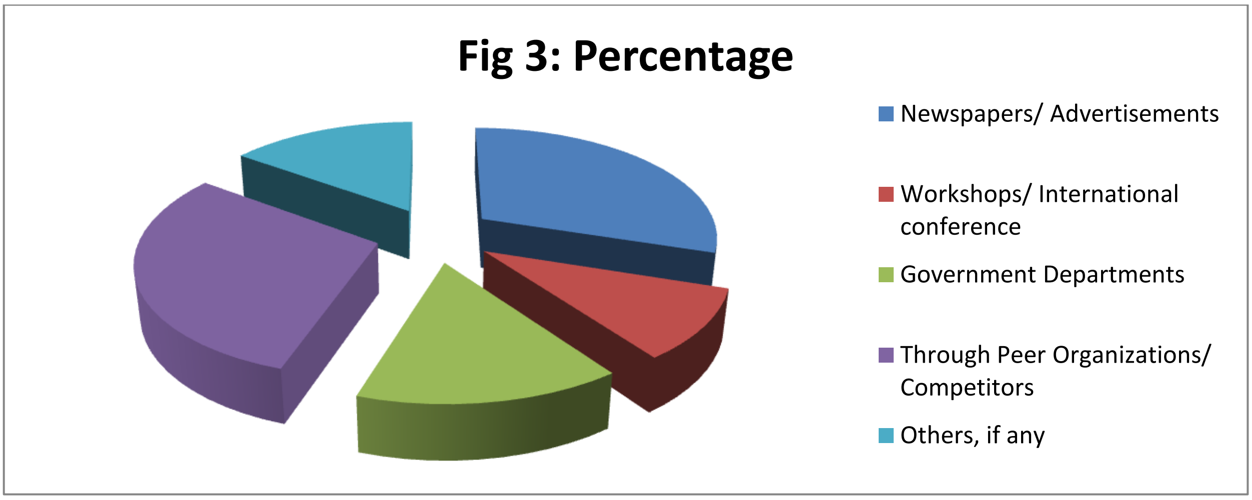


Data Interpretation

Figure 2 shows that almost all the companies are aware about the carbon credit trading.

Q2. How did your organization come to know about carbon emission trading?

S.No.	Activity	No. of Responses	Percentage
A	Newspapers/ Advertisements	6/20	30
B	Workshops/ International conference	2/20	10
C	Government Departments	3/20	15
D	Through Peer Organizations/ Competitors	6/20	30
E	Others, if any	3/20	15

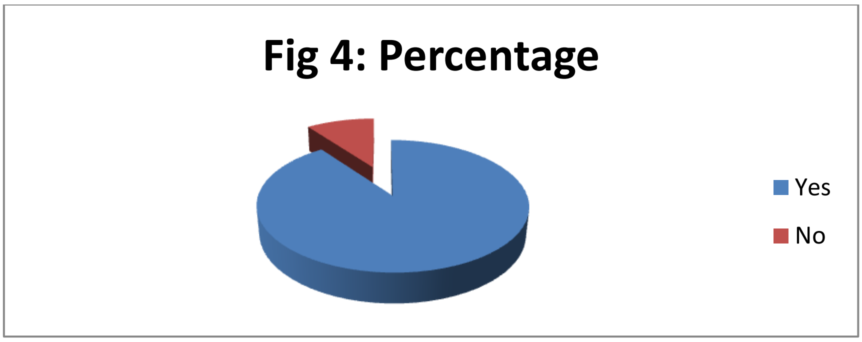


Data Interpretation

Figure 3 shows that most of the organizations are aware through the newspapers, advertisements and competitors. But workshops or international conference are also the medium to introduce this concept.

Q3. Does your organization involve itself in Carbon Credit Trading?

S. No.	Response	No. of Responses	Percentage
A	Yes	18/20	90
B	No	2/20	10

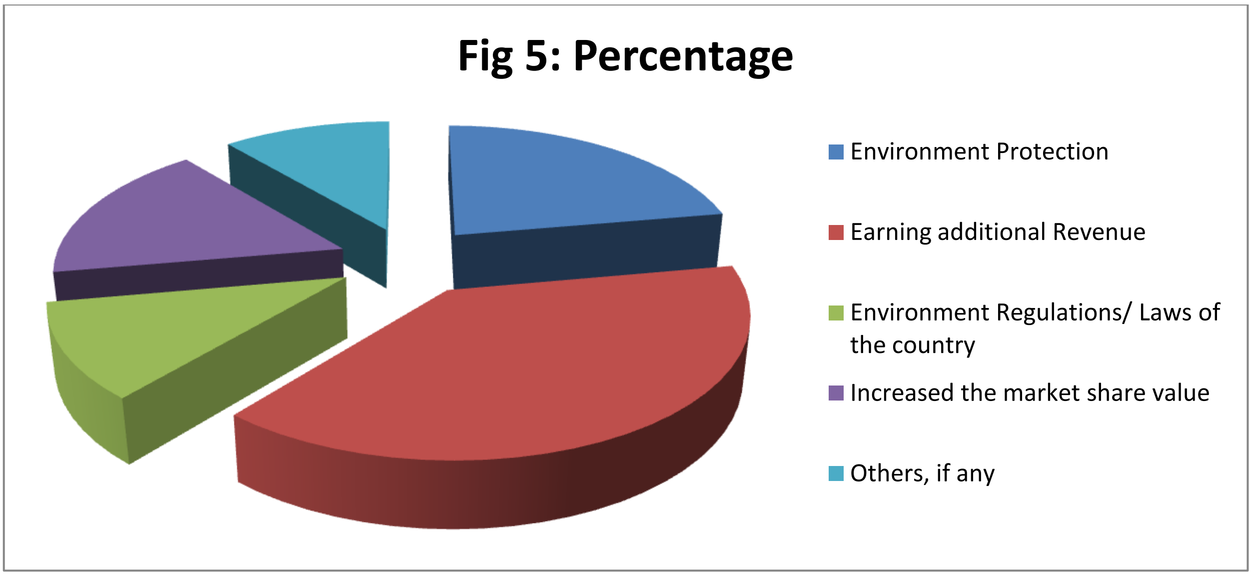


Data Interpretation

In this research figure 4 shows that, 90 % organizations are directly involved in Carbon Credit Trading.

Q4. Why is your organization involved in Carbon Credit Trading?

S.No.	Activity	No. of Responses	Percentage
A	Environment Protection	4/18	22.22
B	Earning additional Revenue	7/18	38.89
C	Environment Regulations/ Laws of the country	2/18	11.11
D	Increased the market share value	3/18	16.67
E	Others, if any	2/18	11.11

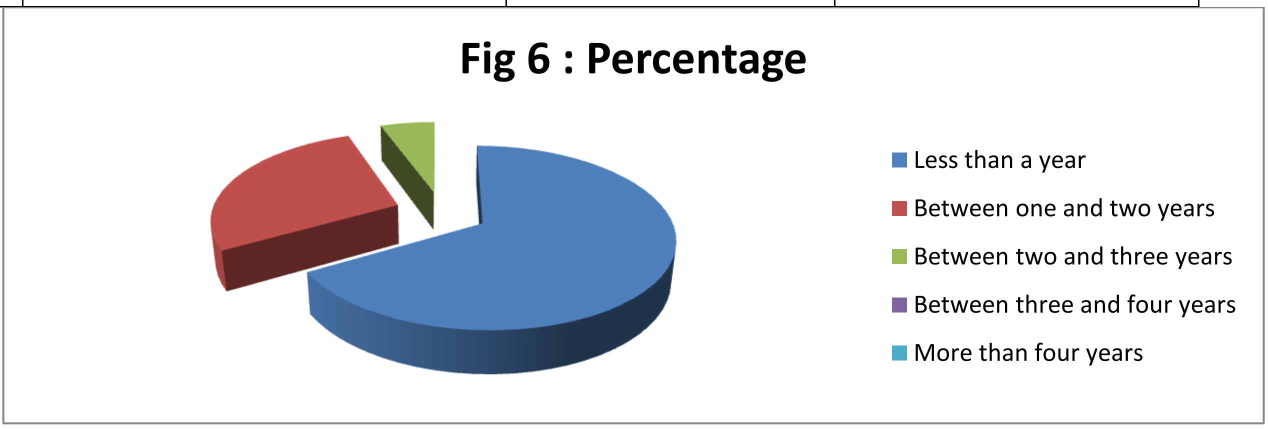


Data Interpretation

Figure 5 shows that the main purposes of involvement by the organizations are to earn additional revenue.

Q5. How long has your organization been involved in carbon credits trading?

S.No.	Activity	No. of Responses	Percentage
A	Less than a year	12/18	66.67
B	Between one and two years	5/18	27.78
C	Between two and three years	1/18	5.55
D	Between three and four years	0/18	0
E	More than four years	0/18	0

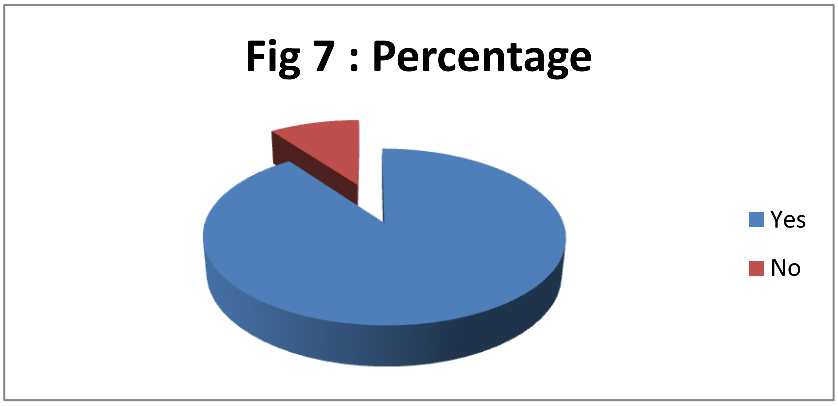


Data Interpretation

Figure 6 shows that most of the organizations are involved in this trading last two years.

Q6. The trading of carbon credits is not affected by the environmental regulation / laws of that country.

S. No.	Response	No. of Responses	Percentage
A	Yes	18/20	90
B	No	2/20	10

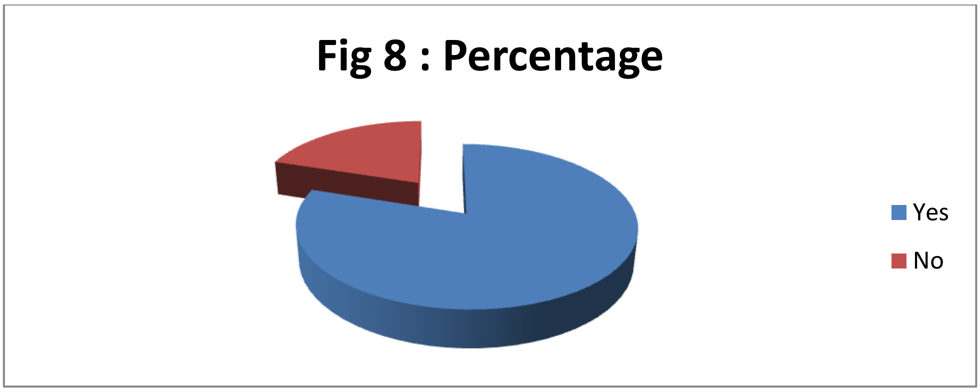


Data Interpretation

In this research figure 7 shows that, 90% responses are in favour of that there is no affects by the environmental regulation / laws.

Q7. The number of products manufactured by an organization does not affect the level of carbon credits traded by the organization.

S. No.	Response	No. of Responses	Percentage
A	Yes	16/20	80
B	No	4/20	20

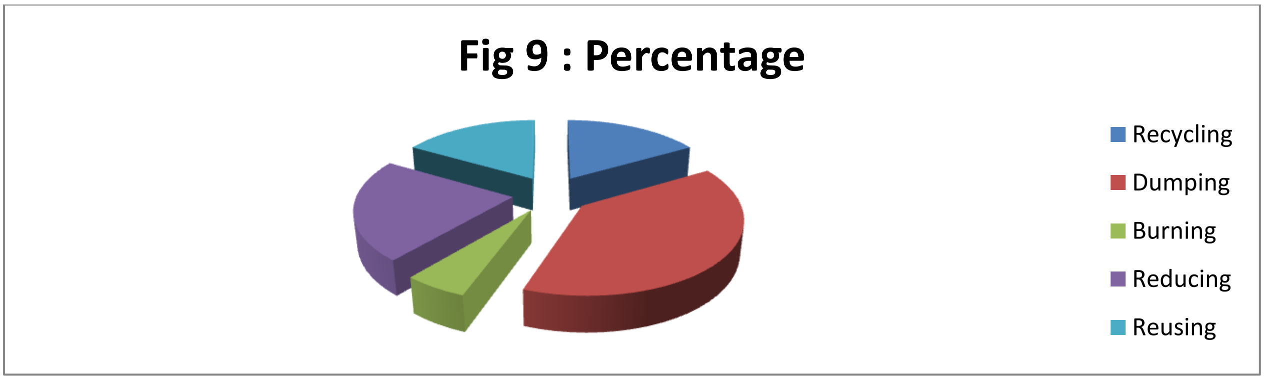


Data Interpretation

Figure 8 shows that most of the organizations are responses that, the number of products manufactured by them, does not affect the level of carbon credits traded.

Q8. What does your organization do for reducing the carbon emission?

S.No.	Activity	No. of Responses	Percentage
A	Recycling	3/18	16.67
B	Dumping	7/18	38.89
C	Burning	1/18	5.56
D	Reducing	4/18	22.22
E	Reusing	3/18	16.66



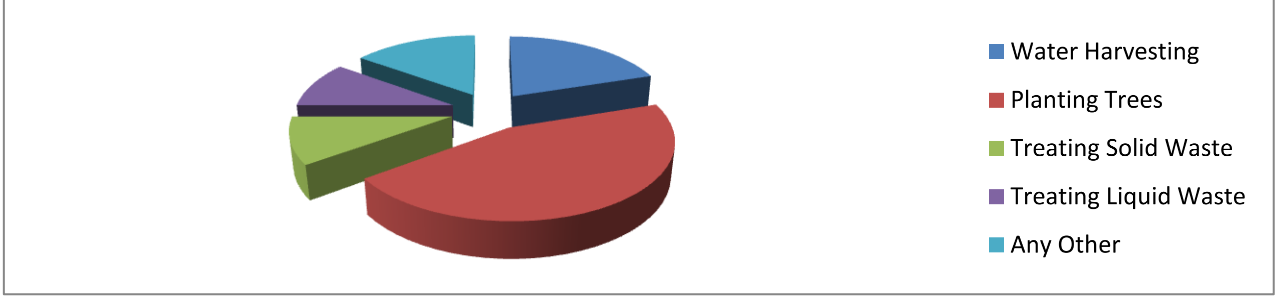
Data Interpretation

Figure 9 shows that the finding about the reduction in carbon emission, the major activity is dumping the waste.

Q9. Do you take any activity for the conservation of eco system?

S.No.	Activity	No. of Responses	Percentage
A	Water Harvesting	4/20	20
B	Planting Trees	9/20	45
C	Treating Solid Waste	2/20	10
D	Treating Liquid Waste	2/20	10
E	Any Other	3/20	15

Fig 10 : Percentage



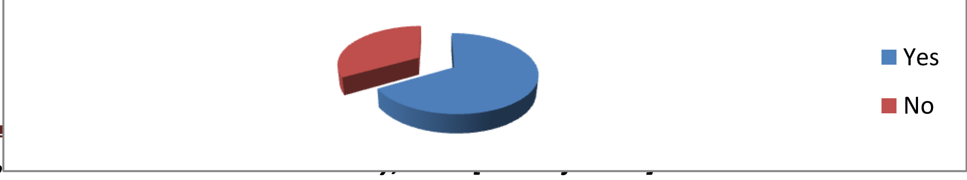
Data Interpretation

Figure 10 shows that the major activity for the conservation of eco system is planting trees but water harvesting is also growing activity for the conservation of eco system.

Q10. Carbon credit trading offers additional revenue to your organization.

S. No.	Response	No. of Responses	Percentage
A	Yes	12/18	66.67
B	No	6/18	33.33

Fig 11: Percentage

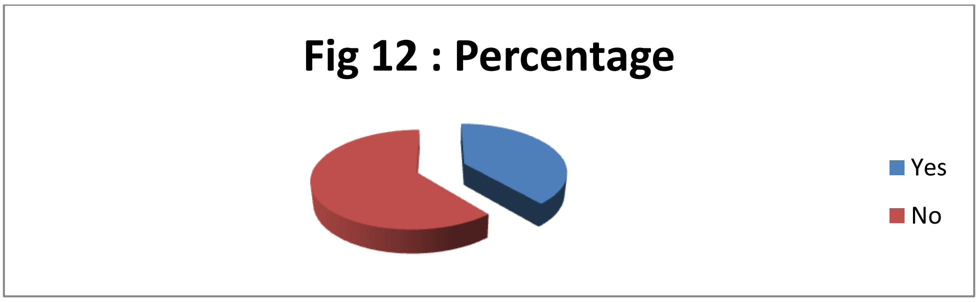


Data Interpretation

Figure 11 shows that the base of involvement by the organizations in carbon credits trading is to earn more revenue.

Q11. Carbon credit trading has improved your organizations' market share value.

S. No.	Response	No. of Responses	Percentage
A	Yes	7/18	38.89
B	No	11/18	61.11



Data Interpretation

In this research figure 12 shows that organizations are not satisfied with their market share value as they expected by carbon credit trading.

FINDINGS

Almost all the companies are aware about the carbon credit trading.

- Most of the organizations are aware through the newspapers, advertisements and competitors. But workshops or international conference are also the medium to introduce this concept.
- In this research, 90 % organizations are directly involved in Carbon Credit Trading.
- The main purposes of involvement by the organizations are to earn additional revenue.

- Most of the organizations are involved in this trading last two years.
- In this research, 90% responses are in favour of that there is no affects by the environmental regulation / laws.
- Most of the organizations are responses that the number of products manufactured by them does not affect the level of carbon credits traded.
- The finding about the reduction in carbon emission, the major activity is dumping the waste.
- The major activity for the conservation of eco system is planting trees but water harvesting is also growing activity for the conservation of eco system.
- The base of involvement by the organizations in carbon credits trading is to earn more revenue.
- In this research, finally organizations are not satisfied with their market share value as they expected by carbon credit trading.

CONCLUSION

The conclusion of this research is basically that there is a good future of carbon credits trading, because of their growth and popularity among the various organizations. The main cause which behind the growth of carbon credit trading is generation of additional revenue by some organizations. As all know the carbon markets development and new market mechanism emerge there will be a tendency to link markets, creating atleast partial level fields. The major problem is inequalities between the developed and developing world and the inability of policymakers to think and act beyond national interests. Nowadays there are several opportunities for the private sector as well as public sector to earn more revenue by this type of trading. So at last, the carbon market is a growing market and lot of opportunities are there for several organizations and only they have to grasp it.

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