

**Business and Sustainable Development**  
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**Lecture - 07**  
**Introduction to Firm's Response**

Hello, welcome to this session, where we are going to discuss what are the responses of the firms for the sustainability or how initially they have responded to this sustainability. So, in the last lesson, we are trying to see what are the drivers, what are the factors, whatever the changes which makes sustainability imperative or which makes sustainability important from the business point of view.

Now, if you remember the last discussion what we are having, we are mostly focusing on four clusters and because of those four clusters, typically the sustainability looks important or sustainability is important.

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**Drivers and Facilitators for Change: Three Big Trends**

- ☐ Declining Resources
- ☐ Radical transparency
  - ☐ First: The power of numbers (civil society)
  - ☐ Second: The magic of low- cost communication
  - ☐ Third: The culture of connectivity
- ☐ Increasing expectations
  - ☐ The investor calling
  - ☐ The customer rising
  - ☐ The regulator acting
  - ☐ The employee engaging
- ☐ Threat or opportunity?

MPTEL Source: Laszlo and Zhexembayeva, 2011

And summarize that further, in this slide we are looking at what are the driver and what are the facilitators for this change. So, mostly this is being summarized as three big trends; one there is declining resources, that we have already established through environmental issues, through the resource depletion, resource degradation and all through also through the concept of limit.

Then second, radical transparency and why there is radical transparency? Because the civil society there is a power of the civil society, power of the numbers those who are actively involve or actively engage in this issue; second the magic of low cost communication. So, here if you look at some point of time, we has to we have to book a trunk call to make a call to the other city or the other town.

Now, everything is just at the finger tips and also there are different modes to connect with the others. So, somehow this communication has become very low; when you we discuss this as a cost perspective, this has become very a low cost communication. Third, there is a culture of connectivity and because of this three reason, this transparency has become very radical, the change in the transparency has become very radical.

Then there is an increasing expectation of the stakeholder; this also we are discussing when we are discussing about that why sustainability is important or why sustainability is imperative. So, there is an increasing expectation, the investors calling, customers rising, regulator acting employee engaging.

Now, what is important over here is that, all these drivers whatever making this changes, whether the businesses or in specific sense the form or the company whether they consider this as a threat or whether they consider this as an opportunity, that we will check based on their responses.

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How Companies Respond to Environmental Concern?

- Environmental concern through action such as publishing an environmental report
  - Issue glossy reports on earth day celebration and internal recycling activities
- Endorse high minded proclamation such as the Valdez – CERES principles
  - which mandate that a company 'sell product that minimize adverse environmental impact'
- Endorse Business character for sustainable development
  - which entreats companies to modify their operation to prevent serious or irreversible environmental degradation

NPTEL Source: Lester B. Lave & H. Scott Matthews, 1996

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Now, how company typically they respond to environmental concern? So, this has been given by Lave and Matthew in 1996; interestingly if you look at few of the company few of the firms, the way they respond to the environmental concern is through actions, such as publishing an environmental report, showing they do a earth day celebration, they do the internal recycling activity, and they publish this as a part of their environmental action.

Some of the company what they do is that, they endorse the proclamation which talks which is having the environmental concern, like which mandate there are some proclamation, which mandates that company sell product that minimize the adverse environmental impact.

And few of the company or many of the company, they endorse the business character of the sustainable development. And what is this business character? Which entreat the companies to modify their operation to prevent serious or the irreversible environmental degradation.

So, mostly if you look at here these three points, there are no clarity what are the action being taken to rise the, real action those have been taken to respond to the environmental concern; but these are few of the examples what how the company they have responded to the environmental concern.

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How Companies Respond to Environmental Concern?

- Willingness to raise insignificant product cost
- Companies will take measure to reduce pollution
  - as long as they do not involve much effort or cost
- Firm would engage in environmentally friendly behaviour
  - if they perceive that such behaviour would lead to favourable publicity with the potential or higher market share

NPTEL Source: Lester B. Lave & H. Scott Matthews, 1996

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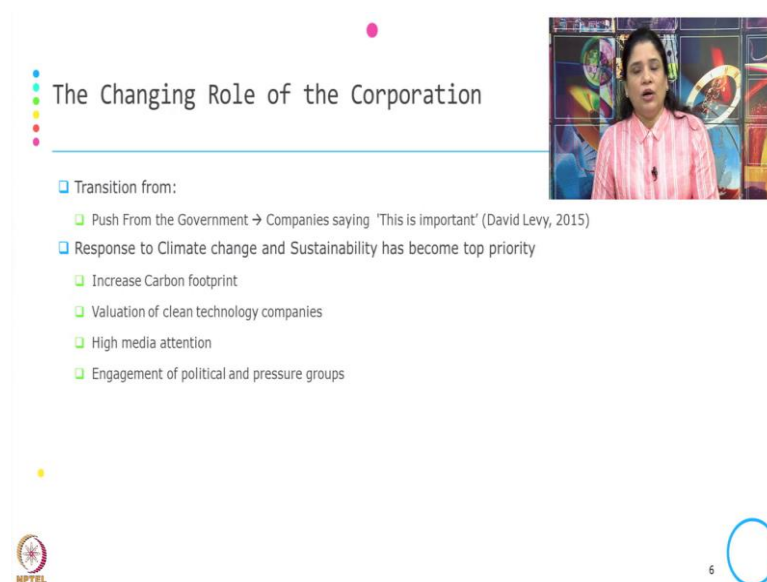
Now, the second point what is more important for the company is that, suppose they respond to the environmental concern; how much profit they are going to get out of this or what is the benefit they are going to get out of this? And when few questions were asked to the company that, if you are integrating the sustainability into the product; how much you are willing to raise your product cost and the response is that, the willingness to raise the product cost is very insignificant.

Because they do not want to take a risk by increasing the product cost; because they are they have they have responded to the sustainability concern. And company which will take measure to reduce pollution as long as they do not have, do not involve much effort or cost.

So, one way they do not want to raise the product cost, because they feel that this is part of the risk associated with this and second also they will take a measure to reduce the pollution, if it is not involving additional effort or additional cost. Then the firm would engage in environmental friendly behavior; if they perceive that, such behavior would lead to favorable publicity with the potential or higher market share.

So, if I summarize all these three points, the companies willingness to takes sustainability initiatives or to reduce pollution; as long as they do not have to increase the product cost significantly, as long as that is not giving them a incurring them a cost or additional effort or as long as whatever actions or whatever the effort they are taking that should give us them some financial benefit or some intangible benefit in the form of the potential let us say reputation or potential market share.

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### The Changing Role of the Corporation

- Transition from:
  - Push From the Government → Companies saying 'This is important' (David Levy, 2015)
- Response to Climate change and Sustainability has become top priority
  - Increase Carbon footprint
  - Valuation of clean technology companies
  - High media attention
  - Engagement of political and pressure groups

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Now, possibly this is one part of it, but over a period of time you will see that, there is a changing role of corporation. So, we have talked about changing role of the market system, we have talked about how there is an increasing role of the stakeholders; but also, there is a changing role of corporation with respect to this sustainability agenda.

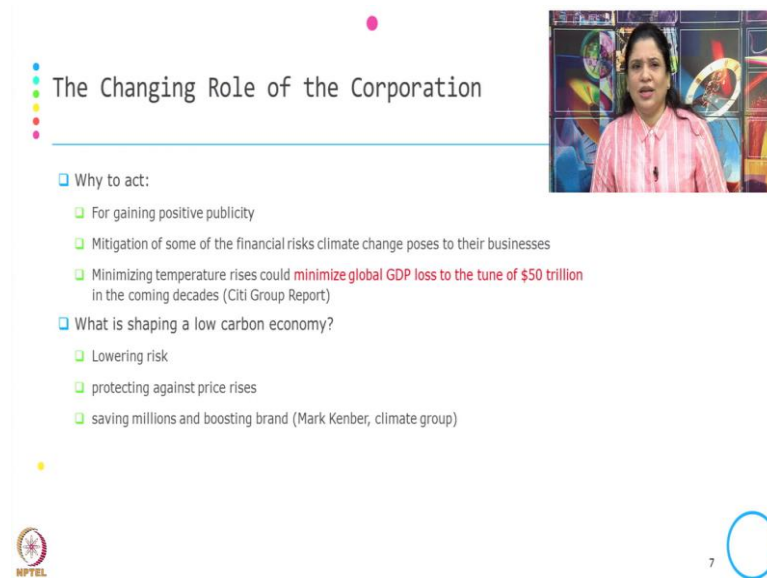
And what is the changing role? This there is a transition from push from the government to undertake the sustainability initiative through the product in their company; now, company itself saying that, this is important for them and they should respond to this. The executives, the firms, the company they response to the climate change and sustainability and they feel that this is part of their top priority agenda.

And why they consider this as a top priority agenda; because there is increase in the footprint, valuation, there is a valuation of the clean technology company or there is a valuation of the clean technology in the market, media attention is very high and there is active engagement from the political and pressure group.

So, here there is importance of the impact what the companies they are doing; there is a valuation if they are doing something good, there is a media attention and there is also engagement from the political pressure group and that is the reason this becomes as a part of their top priority agenda for the corporation.

And the role has changed, rather than the regulator or the government pushing them that this is what important and this is what you should pursue, the company on their own they feel that this is important.

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**The Changing Role of the Corporation**

- Why to act:
  - For gaining positive publicity
  - Mitigation of some of the financial risks climate change poses to their businesses
  - Minimizing temperature rises could **minimize global GDP loss to the tune of \$50 trillion** in the coming decades (Citi Group Report)
- What is shaping a low carbon economy?
  - Lowering risk
  - protecting against price rises
  - saving millions and boosting brand (Mark Kenber, climate group)

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Now, why should they act? To be very possibly, to be the very first answer to this is that, there should be some benefit either tangible or intangible. So, for gaining positive publicity, then mitigation of the some of the financial risk what climate change poses to their business; and there is a fact which is given by the Citi Group report that minimizing temperature rise would minimize the global GDP loss to the tune of 50 trillion dollar in the coming decade.

So, if you are putting something for reducing this that is also reducing our loss associated with this changes and that is shaping the entire the, what we are saying, the low carbon economy and low carbon economy is nothing, but when we are making a transition from the unsustainable to the sustainable economy. And what is shaping the low carbon economy?

Because we feel of we feel that there is a lowering, we need to lower the risk; there is a protection against price rise and by doing this, we will be able to save million and boosting brand that is exist in the market.

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**Perception of Risks**

- Risk posed are well documented
  - Few are willing to keep aside the risks for short term profit
  - Recognition of considerable risk to their bottom line
  - Recognise and understand first-hand the threat of disruption
    - (Physical risk) that climate change will cause to their supply chains, markets and operations
  - Regulatory challenges that could impact their bottom line

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Now, how the perception of risk are being taken by the company or being taken by the firms? Whatever the risk posed by the changes around those are all well documented, there are evidence to few; but you will find that this is being well documented that what kind of risk are going to be there for the business.

So, there are different group of firms, different group of company, they respond differently to this. Few they are willing to keep aside the risk for the short-term profit; they feel that yes even, if there are risk associated with this, but at this point the agenda is there are some short-term profits. So, possibly after gaining the short-term profit, I will see what are the risk associated with this. So, there are a group of firms which who feels that, for the time being it is easy to keep the risk aside and look for the short-term profit.

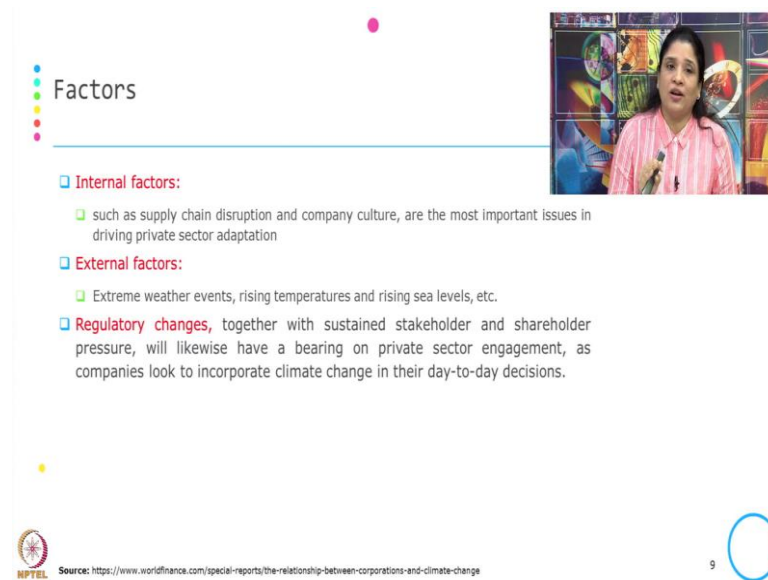
But there are also a bigger group of firms, who recognize that there is a considerable risk to their bottom line; they recognize and understand whatever the first hand threat of the disruption, mostly the physical risk; that climate change will cause to their supply chain, market, and operations.

So, even if few firms they feel or many firms they feel that, yes for the short-term profit let us ignore the risk associated with that; but there are also significant group of firms, significant group of company if you will find through their communication through the ir action, they recognize that there is a considerable risk associated with the bottom line.

And mostly in term of the physical risk, what the disruption is there is a threat of disruption, which will affect their supply chain, market and operations.

And lastly, there are because of all these changes, there is also going to be change in the regulation and this regulatory changes that could impact the bottom line. So, one there is a physical risk; second there are regulatory challenge those are going to affect the bottom line of the businesses or bottom line of the firms.

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**Factors**

- **Internal factors:**
  - such as supply chain disruption and company culture, are the most important issues in driving private sector adaptation
- **External factors:**
  - Extreme weather events, rising temperatures and rising sea levels, etc.
- **Regulatory changes,** together with sustained stakeholder and shareholder pressure, will likewise have a bearing on private sector engagement, as companies look to incorporate climate change in their day-to-day decisions.

Source: <https://www.worldfinance.com/special-reports/the-relationship-between-corporations-and-climate-change>

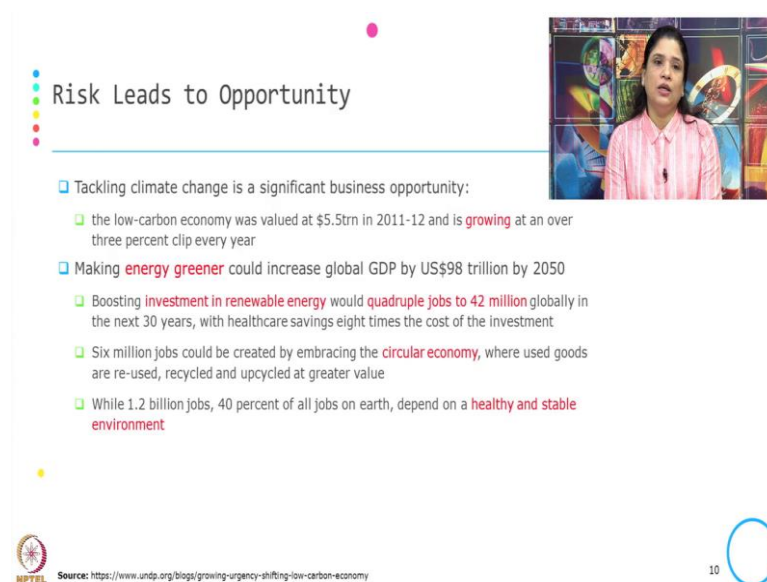
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And based on that, these are the factors which will lead to that, lead to the fact that why they should respond or why there should be action associated with this. First is the internal factor, that we are discussing in the previous case also supply chain disruption, company culture and are the most important issue, which needs the adaptation; external factor like extreme weather event rising temperature, rising sea level apart from other external factor, which comes from the other stakeholders.

And regulatory changes, together with stakeholder and shareholder pressure, will have bearing on the private sector engagement and as company look to incorporate climate change in their day-to-day business. So, mostly all the factor which leads to these changes, leads to this responses, lead to this actions; either their internal or their external. So, external mostly we look at the events which we do not have the control over it and also the stakeholder and the shareholder pressure.



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**Risk Leads to Opportunity**

- Tackling climate change is a significant business opportunity:
  - the low-carbon economy was valued at \$5.5trn in 2011-12 and is **growing** at an over three percent clip every year
- Making **energy greener** could increase global GDP by US\$98 trillion by 2050
  - Boosting **investment in renewable energy** would **quadruple jobs to 42 million** globally in the next 30 years, with healthcare savings eight times the cost of the investment
  - Six million jobs could be created by embracing the **circular economy**, where used goods are re-used, recycled and upcycled at greater value
  - While 1.2 billion jobs, 40 percent of all jobs on earth, depend on a **healthy and stable environment**

MPTEL Source: <https://www.undp.org/blogs/growing-urgency-shifting-low-carbon-economy>

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Now, it is not all about risk, the entire crux of the thing is that whatever the risk over there; when we are taking a response to this or when we are taking an action to this, this can be converted into opportunity. And if you look at this is being reported that, the value of the low carbon economy that was in 2011-12 is 5.5 trillion dollar and at that point of time it is growing over three percent clip every year. So, look at what would be the size of the low carbon economy.


And so, it is not only going to be free, it is not going to be incur cost to the company; but over a period of time all this risk whenever being addressed properly this is leading to the opportunity. Now, few more facts that how this can be converted into opportunity; making the energy greener could increase the global GDP by 98 trillion US dollar by 2050.

So, thus look at the size of the increase in GDP, if you are just if you are just transiting from the current source of energy to the greener energy. Now, boosting the investment in the renewable energy will increase the job to 42 million globally in next 30 years, creating the employment opportunity with the healthcare saving eight times and the cost of investment. Six million job could be created by embracing the circular economy, where used goods are reused, recycled and up-cycled at a greater value.

And 1.2 million jobs, that is 40 percent jobs on the earth, depend on a healthy and stable environment. So, if I summarize this if you are, if you are addressing the risk properly it

is going to give us the opportunity. Those opportunity sometimes it is tangible, where we can get the information, we can get the data points; sometimes it would be intangible, that is in term of the reputation increase, reputation and increase brand.

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The slide is titled "Risk Leads to Opportunity" and features a bulleted list of points. A small video inset in the top right corner shows a woman in a pink shirt speaking. The slide is branded with the HPTEL logo in the bottom left and the number 11 in the bottom right.

- Sustainability is the next source of competitive advantages
  - available environmental friendly technology and development of innovation
- Managing for sustainability is
  - Mitigating the risk and capitalize opportunities
- Intangible Benefit
  - Corporate reputation and Brand
  - Employee recruitment, engagement and retention

And this is also being internalized by the firms that sustainability is going to be the next source of competitive advantage. And how it is going to be the next source of competitive advantage? That is through the available environmental friendly technology and also the series of development what we have done in the field in, series of development of innovation what we have done in this space.

Then managing sustainability is not all about risk; in one way it is mitigating the risk at the beginning, but capitalize that opportunity at a later point of time which gives us the tangible benefit. And what are the intangible benefit? There is corporate reputation and brand, enhancing this corporate reputation and brand; then increasing the recruitment, because you are considered to be the better company, good company, the engagement of the stakeholders and also the employee will return, because this gives a good workplace for the employee.

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What the companies should do?

- How can they profit from what they do?
  - Transition to low-carbon economy
    - Example: energy, transport, and heavy industries
  - Optimization of the carbon efficiency of existing assets and products:
    - Infrastructure (buildings, power stations, data center, factories)
    - supply chains
    - finished goods (automobiles, flat-screen TVs, PCs)
  - How to optimize?
    - improving energy efficiency
    - shift to less carbon-intensive sources of power (such as nuclear, wind, solar, and geothermal)
  - Development of new low-carbon solutions
    - Example: large-scale supply of biomass to power plants
    - second-generation biofuels

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Now, what the company they should do or how can they get the profit what they do? Few examples like they have to transit to the low carbon economy. Now, we know that the low carbon economy is that, where we use the inputs which is giving us, which is giving us the less carbon is the outcome. We have already started in our energy, in transport sector, heavy industry and other sector; few of the sector they have responded to the regulation or few of them they have internalized the fact that this is going to the future.


If they are doing it now, they have the first mover advantage or they are at a, over a long period of time, they are going to get a long-term profit out of this. Then optimization of the carbon efficiency of the existing asset and product that is carbon efficiency in infrastructure, carbon efficiency in across the supply chain and finished goods in the final product. So, like if you take the example of supply chain, how do you optimize the carbon efficiency?

When you are sourcing, starting from the sourcing of raw material; how do we optimize in the logistic, in the production process and finally, at the end product disposal, we need to see how we can; how we can optimize our carbon efficiency. And how do we optimize? There are two way we optimize; one we improve the energy efficiency or we think we see that what are the alternative source of well which is less carbon intensive,

like improving the energy efficiency is one and second shift to the less carbon intensive source that is nuclear wind, solar and geothermal.

And the last one is that, what the company they typically do and also, they get a profit out of it is the development of the new low carbon solution; the typical example is our second-generation biofuel and the large-scale supply of biomass to the power plant.

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The Responses

- Digital – Emerging – Climate/Sustainable Economy
- Transition from Regulation to Sustainable Growth
  - Principle of Economic growth and environmental quality reinforce each other in long run
- Reluctant Compliance → beyond Compliance and product stewardship
- Changing mind-set to Improve internal system
- Adoption of new tools and technologies for assessing impact and performance

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Now, if you summarize the companies, responses to this sustainable agenda or sustainability; now the responses have been. So, at some point of time companies they responded to the digital economy; some point of time when the changes happened, they responded to the emerging economy and now they are responding to the climate and sustainable economy.

So, their move, there the transition they are doing from regulation to the sustainable growth; it is not only reacting to the regulation, rather they are planning that whatever the growth they are going to achieve, how that growth has to be sustainable.

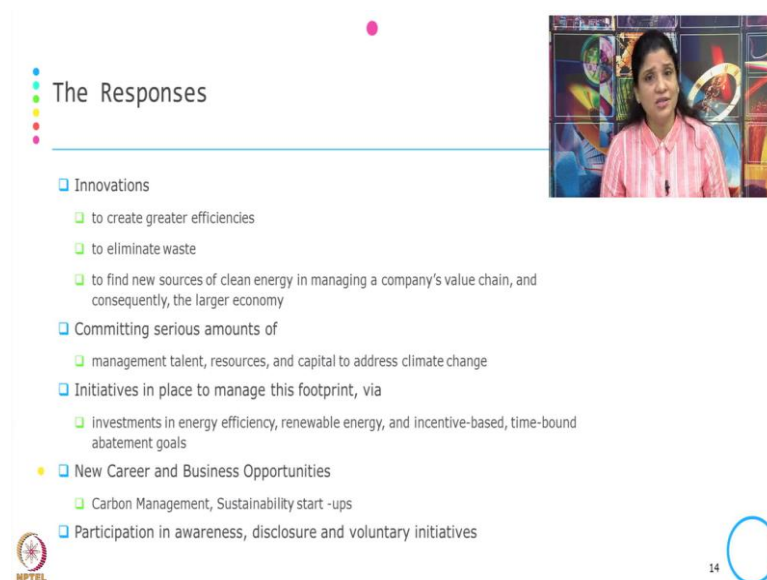
Because the principle of economic growth and environmental quality reinforce each other in the long run; that we have seen in our previous class, when we are looking at the link between environment and economy and this is beautifully explained through the environmental Kuznets curve.

And over a period of time, the mindset of the corporate has also change to improve internal system and also just responding to the compliance, responding to the regulation, reluctant compliance to moving towards that what we can do beyond compliance to achieve the sustainability and also the product stewardship.

So, this will say again that how over a period of time the company they have responded to this concern, this environmental concern when we discuss about the corporate strategy. But at this moment the transition or the change in the mindset of the corporate has happened from the reluctant compliance to the beyond compliance and the product stewardship.

Now, they have adopted new tools and technology, which will assess their impact and performance. So, they have adopted new tools and technology, which will give them their assessment that how much impact were creating and also what is the corporate performance they are, corporate environmental performance they are achieving by doing these changes.

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**The Responses**

- ❑ Innovations
  - ❑ to create greater efficiencies
  - ❑ to eliminate waste
  - ❑ to find new sources of clean energy in managing a company's value chain, and consequently, the larger economy
- ❑ Committing serious amounts of
  - ❑ management talent, resources, and capital to address climate change
- ❑ Initiatives in place to manage this footprint, via
  - ❑ Investments in energy efficiency, renewable energy, and incentive-based, time-bound abatement goals
- ❑ New Career and Business Opportunities
  - ❑ Carbon Management, Sustainability start -ups
- ❑ Participation in awareness, disclosure and voluntary initiatives

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They are they have developed the innovation, they have adopted this innovation to create greater efficiency to eliminate waste, to find new source of clean energy in managing companies value chain and consequently the larger economy. They are committing serious amount of management talent, resources, capital to address the climate change;

then there are initiative to manage the footprint, they invest in energy efficiency, renewable energy, incentive based and time bound abatement goal.

There are new career and business opportunities. So, you will find there are lot of sustainability startup in our startup space; they offer you the carbon clean technology, they offer you the carbon clean solution, they offer you the consultancy that how the company they should address their sustainability issues. So, there is an entire space which takes over by the sustainability startup either in term of the providing product, in term of providing technology or providing the consulting.

And there is a new career opportunity altogether, which is we call as a carbon management, which has spread over the manufacturing sector and taking it to finance and consulting. Then also the company they are participating in awareness about the environmental concern; they are participating in the even the mandatory disclosure and also the voluntary disclosure.

And many more voluntary initiative, like if you look at the sustainability report or business responsibility report is only for the top hundred company; but you find that many company they are publishing this, they are giving it the energy, water whatever the consumption they are putting it in their annual report. And also, they are doing lot of voluntary initiative for this outreach awareness for the sustainability among the different stakeholders.

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**Few Initial Responses**

- 3M (Scotch-tape maker)
  - Pollution Prevention Pays
- Apple
  - Measures and reports the life-cycle carbon footprint for each one of its products - "Dave", a recycling robot designed to recover rarer materials such as earth magnets and tungsten from old phones, as well as a percentage of the steel used.
  - Innovation in Materials
    - e.g., their decisions to shift to 'unibody' aluminum Macbook Pro laptops
- UPS
  - Tracks and incentivizes employees on the basis metrics
    - such as 'GHG emissions per 1000 Kg. of packages delivered'
  - Environmental Friendly Packaging

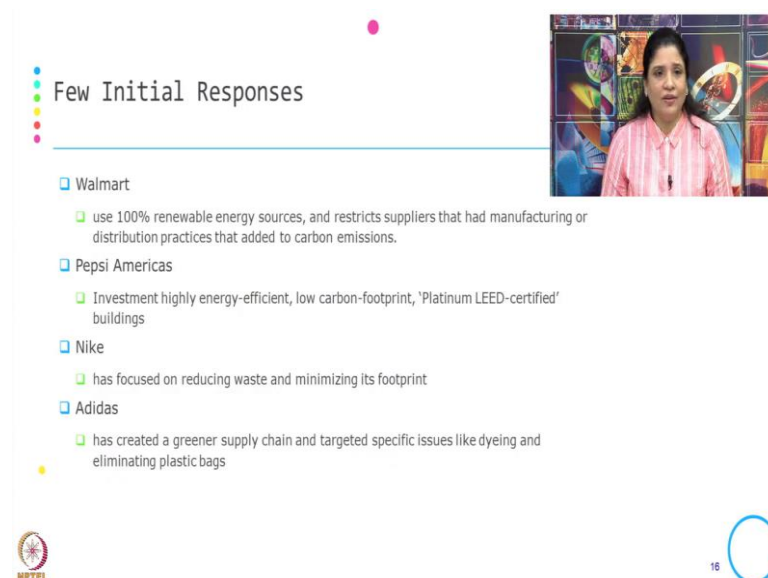
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These are the example of the few initial responses by the lead companies; there are many more examples, these are few of the initial responses like 3 M's 3 P's, which is the most popular thing since last 30, 35 years they are successfully running, that is pollution prevention pays.

Then apple, they measure and report their lifecycle carbon footprint for each one of its products. So, the innovation what they have done is that, Dave that is the recycling robot designed to recover the rarer material such as earth's magnet and tungsten from the old phone and as well as the percentage of the steel use, so that can be reused. Then they have done also in the innovation in the materials; their decision to shift from the to unibody aluminum Macbook Pro laptops.

Similarly, UPS, they tracks incentivize employee on the basic metrics, such as GHG emission per 1000 kg of package deliver, based on that they give the incentive to the employee and also, they focus on the environmental friendly packaging.

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**Few Initial Responses**

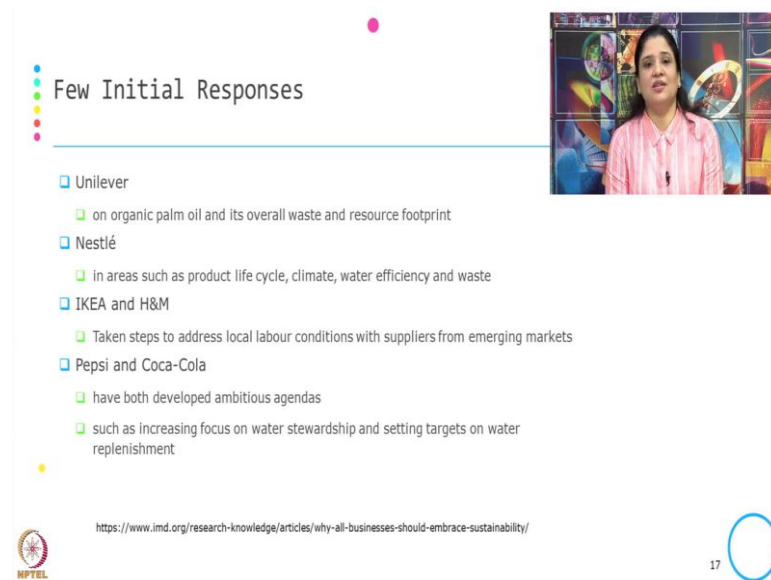
- Walmart
  - use 100% renewable energy sources, and restricts suppliers that had manufacturing or distribution practices that added to carbon emissions.
- Pepsi Americas
  - Investment highly energy-efficient, low carbon-footprint, 'Platinum LEED-certified' buildings
- Nike
  - has focused on reducing waste and minimizing its footprint
- Adidas
  - has created a greener supply chain and targeted specific issues like dyeing and eliminating plastic bags

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Similarly, Walmart, they use 100 percent renewable energy sources, restricts supplier that had manufacturing or distribution practices that added the carbon emission, which create from the create pressure for the supplier to take the sustainability initiative. Then Pepsi America invest, they invest in the high energy efficient and low carbon footprint and they have platinum LEED certified buildings.

The Nike has focused on reducing waste and minimizing the footprint; Adidas has created a greener supply chain and targeted specific issues like dyeing and eliminating plastic bag.

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**Few Initial Responses**

- Unilever
  - on organic palm oil and its overall waste and resource footprint
- Nestlé
  - in areas such as product life cycle, climate, water efficiency and waste
- IKEA and H&M
  - Taken steps to address local labour conditions with suppliers from emerging markets
- Pepsi and Coca-Cola
  - have both developed ambitious agendas
  - such as increasing focus on water stewardship and setting targets on water replenishment

<https://www.imd.org/research-knowledge/articles/why-all-businesses-should-embrace-sustainability/>

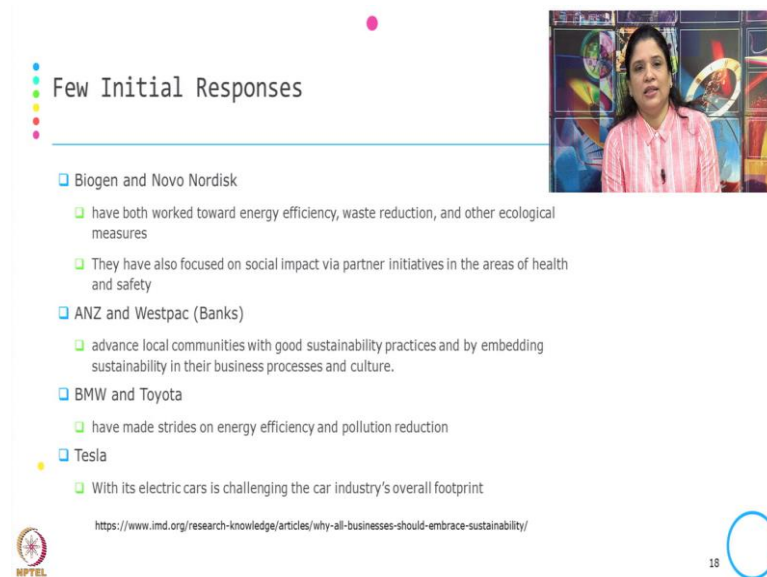
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Similarly, few more Unilever on organic palm oil and overall waste in the resource footprint. Nestle in areas such as product lifecycle, climate, water efficiency, and waste; IKEA and H and M, they taken the step to address local labor condition with supplier with emerging market. Pepsi and Coca Cola have both ambitious agenda, such as increased focus on water stewardship, setting targets on water replenishment.



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### Few Initial Responses

- Biogen and Novo Nordisk
  - have both worked toward energy efficiency, waste reduction, and other ecological measures
  - They have also focused on social impact via partner initiatives in the areas of health and safety
- ANZ and Westpac (Banks)
  - advance local communities with good sustainability practices and by embedding sustainability in their business processes and culture.
- BMW and Toyota
  - have made strides on energy efficiency and pollution reduction
- Tesla
  - With its electric cars is challenging the car industry's overall footprint

<https://www.imd.org/research-knowledge/articles/why-all-businesses-should-embrace-sustainability/>

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Then Biogen and Novo Nordisk have both work towards energy efficiency, waste reduction and other ecological measures; they have also focused on social impact by partner initiative in the area of health and safety. Similarly, the example of banks, which advance the local community with good sustainability practices and by embedding the sustainability in their business process and culture.

And the automobile BMW and Toyota, have made stride on energy efficiency and pollution reduction. And Tesla the, everyone knows about Tesla with their electric cars through their overall footprint.

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And in this session what we have tried to summarize that, how firms they have responded to the sustainability. Although they consider this as a risk associated with that, all these changes, all these drivers there are risk associated with that; but many company they have taken the risk and in the process of mitigating the risk, they have converted this to the opportunity, which give the tangible and intangible benefits.

Thank you.