

Episode 31: Valuing Natural Capital – A Discussion with Pavan Sukhdev Transcript

Pavan Sukhdev:

Let's define natural capital. It's an economic metaphor for the value that nature delivers to the economy. So these values could be in the form of what's known as ecosystem services. There are things like the air cleaning function of trees or the pollination function of bees. These are all services that elements of nature, be it ecosystems or species or genes deliver to the human world. Frankly, in most cases, they don't charge for these services because when did the bee ever send you an invoice for annual pollination services from this particular bee colony? When did a tree ever send you an invoice or a forest send you an invoice for cleaning the air? So these are the services, but they need to be valued. And we value them by measuring the impact of these services on society.

Michael Torrance:

Welcome to sustainability leaders. I'm Michael Torrance, chief sustainability officer with BMO financial group. On the show, we will talk with leading sustainability practitioners from the corporate, investor, academic and NGO communities to explore how this rapidly evolving field of sustainability is impacting global investment, business practices and our world.

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Michael Torrance:

Today, I'm speaking with Pavan Sukhdev. Mr. Sukhdev is an internationally recognized authority on the integration of sustainability impact and natural human and social capital into accounting and disclosure for the private sector. He was the special advisor and head of UNEP's green economy initiative, a major UN project set to demonstrate that greening of economies is not a burden on growth, but rather a new engine for growing wealth, increasing decent employment and reducing persistent poverty. Pavan was also the study leader for the team, the economics of ecosystems and biodiversity. That study which was commissioned by the G8+5 and hosted by the United Nations Environment Program, aimed at sizing the global problem of biodiversity loss and ecosystem degradation in economic and human welfare terms. And it also proposed solutions targeted at policymakers, administrators, businesses, and citizens for integrating what are formerly thought of as externalities into financial and economic systems. Pavan is the founder and CEO of GIST Advisory, which is a specialist consulting firm, which helps governments and corporations discover measure value, and manage their impacts on natural and human capital. He is the recipient of many awards and recognitions, including in 2020, the Tyler prize for environmental achievement. Thanks for speaking with me, Pavan.

Pavan Sukhdev:

Pleasure. Great to be with you guys.

Michael Torrance:

Let's start out just by learning a little bit about your work and your journey. I mean, you've had a fascinating career, you've accomplished so much, and I'm curious to understand how did you come to originally work on the challenge of value-based accounting and sustainability and integrating environmental and social impacts into economics and how we think about corporate value?

Pavan Sukhdev:

Yeah. All right. Michael, it's been a bit of a journey. So I guess my entry point of that journey was the economic invisibility of nature, which I realized quite early in my life as someone fond of nature was a problem because it didn't seem to figure in the thinking of policymakers or in the decisions of business datas that they used nature because she's valuable, but they lose nature because she's free, because they're constantly considering something that has no price as having no value. And that is actually part of our psychology. We belong to a society, which is mesmerized by the magic of markets. And I could see that being a markets person, right? As a banker, I was basically on the investment banking side and on the trading side and sales and the structuring side, so I wasn't very much involved with markets.

Pavan Sukhdev:

And as someone from the inside, I knew the weaknesses as well as the strengths of markets. And I knew that markets are great at equilibrating volumes of demand and supply and setting prices and allocating capital but I also know that markets are absolutely useless when it comes to solving social problems. That's not what they're built for. And I understood that based on my own life experiences on my being a new father, when I was with my elder daughter Mahima, who would constantly take me to places around where we lived in Mumbai, which were natural areas where she would enjoy herself. And I would say, "Wow, this is priceless. This is really valuable, but it has actually no cost and no price." So I understood the difference between price and value. Price is what you pay value is what you receive.

Pavan Sukhdev:

And when you receive the value from nature, you are basically paying sometimes no price until you lose nature. That was my entry point. And then it led to a project known as TEEB, The Economics of Ecosystems and Biodiversity, because I'd done a project in my home country, in India, on green accounting, essentially adjusting the GDP of our States and union territories in order to be able to present a proper picture to local policymakers. And then I'd gotten involved with the UN and with ICN, and that led to the project TEEB, The Economics of Ecosystems and Biodiversity, which then in turn led to an assignment at Yale University as their McCluskey fellow, where I taught TEEB and wrote a book called corporation 2020. I had got a second project of the UN for my pains. As they say it was, my father used to tell me that the reward for good work is more work.

Pavan Sukhdev:

So when my boss Achim Steiner realized that I was quite a willing laborer, he asked me to do a second project. He says, in his words, "Look, I'm sure you're used to doing more than one thing at a time. I have this small project at the UN. Why don't you handle that as well? It seems to be connected with yours. It's called green economy." I said, "What green economy? As in David PS and [inaudible 00:06:09] and the green economy report?" He says, "Yeah, something like that. It's just a small project." Small project indeed. It turned out to be as big as TEEB. TEEB had several hundred participants and authors. This had almost an equal number. So I ran these two projects for a while, for the UN and delivered two reports, the green economy report, and the TEEB reports. TEEB reports were a suite.

Pavan Sukhdev:

So I was imprinted in that and I still realize that we were missing a key piece of the pie. Two thirds of the economy is private sector measured in terms of GDP or jobs or whatever metric you want to use. And two thirds of the impacts, therefore on the economy are also private sector. By the way, in the US it's three fourths. It's 74% GVA and 75% of jobs. So I was conscious of the fact that all my work over these years from 2008 onwards to 2012, was missing a key feature. As in what do we need to change at the micro policy level? What do we need to change in the engine of the economy, the corporation in order to get the results that we want? And that's what the book that I wrote at Yale University was all about, it was called Corporation 2020, and it was about redesigning the corporation from the outside in and making it respond differently to stimuli and producing the right stimuli in terms of policies, prices, and institutions. So that's where we are today. I run a company which basically works out what's the true impacts of corporations. My company's called GIST, stands for Global Initiative for a Sustainable Tomorrow. And it works out your true impacts in economic terms.

Michael Torrance:

One of the things that stands out for me about the team report is it was happening in 2008. And I was curious as to what was the reception at that time? Nowadays in the last 24 months particularly, there's a huge focus on climate and biodiversity topics, but at that time I could imagine, it was quite a new concept to be integrated with economics and finance. How did that go?

Pavan Sukhdev:

Yeah, it was. But you know we got lucky to an extent it was serendipity that, around that time was a global financial crisis. And every day you would see screaming headlines about \$2 trillion of central bank money used for bailouts or \$2.5 trillion used to stimulate the economy, another \$1 trillion from the US et cetera, et cetera, et cetera. So you'd see all those big trillion dollar headlines. Coincidentally, this little project TEEB that was going along with me and my colleagues had also come out with a scenario analysis, which demonstrated that if we valued ecosystem services, the loss of value to society as a result of the destruction of forest and the destruction of wetlands was in fact of the order of two and a half to four trillion dollars every year of natural capital. So I went to the press, basically to the Guardian and to various others and made this point that yes, you are reporting trillion dollar losses in the global financial crisis, are you aware that there's been something of the same size happening every year for the last several decades and will continue to happen every year for the next several decades, unless policy makers and administrators and especially business folks do something about it?

Pavan Sukhdev:

Well, they were not aware and that became a screaming headline. So we got some attention that way and I think that rang a bell. And then the other thing we did we got right, was that we picked on a few issues. Deforestation and its impacts on the poor. The reality is that nature is the GDP of the poor. If you look at what happens when a forest declines or is destroyed, it's actually the poor farmers fields that don't receive nutrients and fresh water anymore. It's the poor farmer's wife who has to travel another five kilometers to go collect the fuel load that she uses to cook and to keep the house warm. So it's actually the impact of the loss of nature on the poor. That is a much more important story and we call this the GDP of the poor. We said that the nature ecosystem services actually provide direct and indirect benefits to the poor. So you cannot in fact have development unless you protect nature, which has provided so much for the very poor whose lives you're trying to improve.

Pavan Sukhdev:

So these messages went out and I think that got us the attention that the TEEB reports deserved and then the rest, as you know, is a gradual process of increasing awareness. And of late biodiversity loss, thanks to improving awareness and also, thanks again to sadly the COVID crisis, we finally understood the real cost of not living in harmony with nature, of not valuing natural systems, of not understanding risks that are posed to humanity as a result of transmission of viruses, the cost of zoonosis of the cost of one business, basically of consuming wild meat. If you could just work it out, that would be in, you cannot put prices on life, but certainly you can put prices on health costs. And again, we are talking trillions and trillions of dollars. So I think it's a message that needs to be communicated. Uh, it's an idea whose time has come. And I think all of these factors have led to that increasing awareness that you see today.

Michael Torrance:

So can you unpack for our audience a bit about the technical side of your work, whether it's from TEEB or what you've worked on subsequently, this idea of integrated profit and loss reporting and integrating natural human and social capital, what used to be thought of as externalities, as an internality in terms of how a company measures its own performance and discloses to the market?

Pavan Sukhdev:

No, that's a great question. And let me address that point straight on, by saying that externalities are essentially third party costs all benefits of doing business as usual, which are not accounted for by the two parties who are doing business. If I'm a car maker I make cars, I make profit, I'm happy. You buy my car, you drive it, your family and you and your friends are happy. But hey, maybe Maria or somebody else is not happy because the emissions from my car as a result of your driving have led to her beautiful property in Colombia sinking under the waves as a result of climate change, or maybe somebody else is not happy because the pollution from my car has led to respiratory diseases to somebody else. So these are the third party costs. And we didn't account for that when I made my car, nor did you, when you bought my car and drove it. This is the normal problem of a business world and the policy world, which ignores externalities.

Pavan Sukhdev:

What I'm saying to everyone now, and what my firm is doing is preparing impact results for companies, the so-called integrated profit and loss, which means not just the performance of the company for its shareholders, which is in financial capital terms, but also the performance of the company for stakeholders like future generations. In other words, natural capital impacts. What about performance for employees, human capital impacts. What about performance for the society in which you operate, which provides you all of the opportunity that you have, which is social capital impacts. We calculate, we estimate in physical terms, in quantitative terms, and we apply models to work out economic values for all of these impacts.

Pavan Sukhdev:

So we present the full picture of impacts and that's called the integrated profit and loss. That's really what we do. And it's a great learning exercise for everyone who's involved in it, especially for the company and for its investors, because remember today's externalities are tomorrow's risks and day after tomorrow's losses. If it's an externality today, it can come back and bite you in the butt at some point, because some regulator decides to change the law because it doesn't like the fact that there are

health costs because of your business model. And then lo and behold, suddenly you've got for the sake of argument in the UK, you had a sugar levies, sugar taxes based on the reaction of the chancellor of the Exchequer, that the UK national health service was facing five and a half billion pounds of losses every year, costs every year, thanks to having to treat diabetes and obesity.

Pavan Sukhdev:

And the economy of that time was facing another 27 billion pounds of costs because of people not being able to work, lost productivity. So suddenly regulation was introduced and that created a cost, which meant sugar companies and sugar-sweetened beverage manufacturers share prices dropped through the floor. So that's internalization by decree. You can also have internalization by design, which is through the efforts of all of us who are working in this space. You can also have internalization by disaster, which is what happened to BP in the Gulf of Mexico, where basically their market value dropped \$70 billion over the month. And when they had the Gulf oil spill and the CEO lost his job and the company lost its reputation. And they're still suffering some of the costs and penalties from the US government and definitely lawsuits are being settled in the billions of dollars. It's still going on.

Pavan Sukhdev:

So externalities do get internalized. The question is when and how, and by what route. And then the leading question from there is, well, if you're an investor in one of these companies, which has large negative externalities, are you aware of the negative alpha that might hit you in the eighth year of your 10 year run for a private equity portfolio? Would you love to see that? I mean, is that what you want? Clearly not, right? So you need to know the externalities upfront. If you're a C-suite executive, be the CEO or the CFO or any of the others, you need to know your externalities to be able to prevent that from happening and ending up with being instead of the darling of an investor portfolio, ending up being the one outcast that they really want to get rid of. So for all these reasons, it's important to put prices on externalities to do valuations properly. And that's basically what we do.

Michael Torrance:

So that's an interesting anecdote about disasters and how disasters can internalize what might otherwise be considered as an externality. Is that the case for the shareholder to care about this topic and want to have more information about these impacts of companies? What is the relationship between the work that you're doing and shareholder value in the more traditional financial sense?

Pavan Sukhdev:

Sure. I mean, I think the shareholders should care about it because to begin with, of course, it's the stakeholder, the employee, the person in society, the future generation, unborn person, whoever it is. And so basically a lot of people should care about the impacts of the corporation, it's externalities, but at the end of the day, because these impacts these externalities can get internalized as I say, by default, by decree or by disaster, the three D's of internalization, the shareholders should definitely care about it. And the asset manager or the private equity fund should definitely care about it because if they are picking these companies shares in their portfolio, at some point today's externalities are going to become tomorrow's risks and day after tomorrow's losses and their portfolio will not look so nice anymore. So this is definitely something that shareholders need to worry about.

Michael Torrance:

So Pavan, if we could just again, unpack some of these concepts a little bit more, particularly for sustainability professionals who might want to utilize these techniques, let's start with natural capital. What is natural capital exactly? And how would you measure it and report on it? I can imagine there's probably some listeners who might be wondering, it seems like there'd be a lot of uncertainty around that. How do you define the scope of that concept? And what would you use to be able to actually integrate it into a reporting framework?

Pavan Sukhdev:

Sure thing. Yeah. So I'll talk to you about natural capital. Well, let's define natural capital. It's an economic metaphor for the value that nature delivers to the economy. So these values could be the form of what's known as ecosystem services and in some contexts they are referred to as nature's contributions to people. They are things like the air cleaning function of trees or the pollination and function of bees. These are all services that elements of nature, be it ecosystems or species or genes deliver to the human world. Frankly, in most cases, they don't charge for these services because when did the bee ever send you an invoice for annual pollination services from this particular bee colony? When did a tree ever send you an invoice or a forest send you an invoice for oxygen production or cleaning the air or whatever? So these are the services, but they need to be valued and we value them by measuring the impact of these services on society.

Pavan Sukhdev:

So if you have bee based pollination, if you don't have it, there are actual measurements which give you the estimate of fruit and crop productivity in good bee years versus bad bee years. And that estimate is a variation. It's a difference between crop productivity, which can be given an economic value because you know how much fruit is worth and crops are worth. And that has been estimated globally as something like 150 billion euros, which is about 200 billion US dollars, which is almost a 10th of the total agricultural output. So that's pretty huge, right? So we're talking about bee based pollination, bees and other insects of course, a pollination by insects being worth almost a 10th of the total value of agricultural crops, including fruit.

Pavan Sukhdev:

If we want to work out the value of ecosystem services of forests, well forest capture carbon and they also generate carbon if they're burnt or they are destroyed. But overall as a forest is growing, it will capture carbon. We can work that out in terms of carbon sequestration. And we know that that much carbon that is captured by the forest is not being added to the atmosphere. So it will result to a reduction in the loss due to climate change. We know from the Stern review and from the US EPA and other such studies that have been done, we know how much is the estimated economic cost of climate change. And if we also know based on our estimate of the accretion of carbon by forest, and that's the scientific calculation that is available, how much less carbon pollution will take place and therefore for how much less damage would take place as a result of less carbon pollution.

Pavan Sukhdev:

So therefore we know the value that a forest for instance delivers to the society in terms of its reduction of negative impacts of climate change. By the way, what does climate change do? It creates changes in weather patterns, it creates additional storms, cyclones, floods, droughts. All of these are economic costs as you can well imagine. So there are estimates, the Stern Review and the US EPA and various other estimates which have been done, which give us these estimates so we can work these

things out in economic terms. That's what valuation is all about. Valuation is not about putting a price on nature. There is no such thing as a price on nature, right? The valuation is about measuring and valuing the ecosystem services of different aspects of nature, whether it's a forest or whether it's a collection of pollinators or whether it's just... You know what it could be just nature in a park.

Pavan Sukhdev:

You walk into a park, which is typically free, you sit there, you enjoy life. If you were asked whether you enjoy it, you'll say yes, if you were asked, would you pay for it? You'd probably be willing to pay two euros or a couple of dollars for entry into that park. Well, that's the value that you have through willingness to pay exhibited for observing the butterflies and the flowers and the trees and absorbing the beautiful lush greenery of the park. You're willing to pay that. So that's another way of estimating the value. That's basically called contingent valuation. Other ways of estimating value well is based on observing asset prices, which are close to nature. If you are for the sake of argument at a high flat, which has a nice view of central park in New York, which is on 56th street, maybe that flat if it's, let's say a thousand square feet, maybe worth \$2 million, but if you happen to have an identical flat, just in 58th street, literally two streets away where you don't have a view of central park, well, that flat may be worth \$1 million.

Pavan Sukhdev:

And that is an example of the market demonstrating that there is a difference in value simply because a certain asset has been priced differently because of the view of central park and so on, and so on. There are many different ways of estimating economic values of nature services and I've given you four examples and there's a whole library of these. And there's a whole approach which has been summarized by the TEEB project, The Economics of Ecosystems and Biodiversity, which I was privileged to lead in 2008 to 2010. And of course there's more recent work that's been done, such as by Professor Partha Dasgupta and his team, they've just come out with a study, sorry, they will soon be coming out with a study, which is being launched in a couple of days from now which is a biodiversity report. And they of course have updated a lot of the work that was done by TEEB and provided fresh insights as well. So this is good stuff. It's all going on. It's now time for policymakers and businesses to use these natural capital impacts and certainly we, that is GIST my company definitely are going to do that. And we're going to use all of this information as we already do and provide it in the form of impact valuations, to companies and investors who are interested in these things.

Michael Torrance:

And what about human and social capital? I believe this is something that in your work, you're also thinking about how it can be integrated. How do you define those and how do you measure and propose that they be integrated for reporting purposes?

Pavan Sukhdev:

Sure. So just like natural capitalism and economic metaphor for the value that nature delivers into the economy and a lot of it is free. So also human capital is an economic metaphor for the present value of future incomes that are generated as a result of good training and good human development, and also good health and safety policies carried out by companies, enabling employees to learn, to train, to improve their earning power and therefore to be more valuable employees and therefore earn more for being more valuable employees in the future. We can calculate that. We can calculate the change in an employee's expected income at the time she joins the company versus her expected income at the time

that she leaves the company perhaps five years later because her partner moved or because she got a better offer somewhere else or whatever happens. So the estimates of value of the employee can be worked out in terms of present values of future incomes.

Pavan Sukhdev:

And they change over time, thanks to her own credibility and qualities, but also thanks to the training and development and opportunity provided by her current employer. So these are contributions to human capital. And social capital is essentially all of the relationships. And that could be an economic metaphor for all of the relationships in society. Be they formal institutions like law and order, and the constitution of the country and taxation systems and so on, or whether they are informal institutions like trust and respect and communal harmony. So there are formal and informal institutions which comprise a lot of the bedrock of society and that the economic value of those institutions is essentially social capital. And that's more difficult to estimate because unlike human capital which generates income salaries and bonuses and natural capital generate incomes in the form of crop productivity or value of property and so on and physical capital, which produces incomes in the form of profits for the company. Social capital doesn't automatically generate incomes, but you can bet your bottom dollar that in the absence of social capital, none of the other three capitals is as effective in generating incomes. And that you can calculate.

Pavan Sukhdev:

You can calculate how much will be lost to natural capital, to human capital and to produce them, produce capital, companies profits in other words, as a result of loss of social capital. And that's basically how we model social capital, we use different models in different contexts. CSR programs can be estimated based on the additional health value that they create or the additional educational value that they create. And you can say that, well, a company has spent X on creating health and social value for the people in its community. What would be doing so because the expenditure that it has undertaken, at least as much as the value that is creating. So the different ways of doing it, but we can estimate these. And there are lots of models that we use to estimate such values of social work.

Michael Torrance:

There's been increasing government and policy focus on this topic, but not a lot of clear direction. Christine Lagarde recently mentioned that she sees in the near term that there will likely be more policy progress on the three I's as she called it. One was inclusion of social and environmental costs in the economy. That could be through things like carbon tax regimes for example. The second I is information through individual company disclosure, which is obviously key to what you're focused on. And then the third would be innovation in green investment and particularly through equity, investment and asset management. What would you say to policy makers based on the work that you've done for over 10 years on this should be their focus in thinking about regulatory approaches to these issues?

Pavan Sukhdev:

I would say the policy makers should really make an appeal to an independent institution, which is the accountancy bodies, right? The global body in terms of the IASB, the International Accounting Standards Board. And they should appeal to the individual as national policymakers, they should sit down their national accountancy bodies. And in the UK, it would be the ICAEW, the Institute of Chartered Accountants of England and Wales and in the US it would be the FASB, the Financial Accounting Standards Board, and say to them that, "Look, you are doing a great job so far in terms of bringing to the

investor and to the public at large, the impacts of the company on shareholders. But what are you doing in terms of impacts on stakeholders? Surely that's also important because today the corporation that you are tasked with managing the disclosure for is the single largest institution of our time."

Pavan Sukhdev:

Collectively the corporate world is two thirds of the economy and jobs, and therefore two thirds of the impacts on the environment and so on. So you need to improve your capture of data and create standards and accounting standards, which publicize the value creation or the value loss that has been caused by the company on human capital, natural capital and social capital. You need to be even more comprehensive in your duty of creating information for the operations of the company, and therefore hold them accountable to more than just their financial stakeholder, which is the shareholder. Having said that for the accountants regulators to not ask for impacts on natural social and human capital also illustrates a degree of short-sightedness because honestly, those impacts do come back to the bottom line in some form at some point, whether it's by design, by decree or by disaster, as I mentioned earlier. So it is also in the interest of the shareholders to be aware of these impacts and not make them appear as surprises in the 11th hour of an important exercise or in the eighth year of the ten-year holding period for private equity plan or whatever. So I think this is what policymakers should be doing, engaging actively their respective accountancy bodies to expand the brief of these accounts, to see bodies into reporting not just financial capital impacts, but also human social and natural capital impacts.

Michael Torrance:

There has actually been a lot of momentum towards thinking about sustainability disclosure in the context of accounting standards with of course the IFRS, International Financial Reporting Standards body looking at establishing a sustainable standards board that would bring together various types of voluntary disclosure from GRI, CDP, SASB, IIRC, and then develop a common approach. And this emerged from work that the world economic forum did in 2020, driving towards common approaches for this kind of disclosure. Do you think that type of work holds promise to achieving the goals you think it should from the work that you've done, or is it going in a direction that is different from what you're envisioning?

Pavan Sukhdev:

Well, I think it's all broadly pulling in the same direction, which is towards greater transparency and therefore greater accountability of corporations towards stakeholders. I think the impetus that was given to this in 2019, September or October by the US group, the corporate leaders who came together and declared that the purpose of the corporation matters. It's not just about profits and shareholders.

Michael Torrance:

The business round.

Pavan Sukhdev:

The BRT, as it's known as the Business Round Table in the US and I think the world economic forum meeting in was it January 2020, which actually center staged this issue of corporate purpose and accountability. I think these are all very good steps in the same direction. What I fear is that there shouldn't be too many, and there is a tendency for the corporate world to be quite egotistical. And to think that they are the fountain of all knowledge and that they've created something new. They haven't,

to be honest, there's a whole bevy of economists who've been saying this, and I'm talking about serious economists, like Nobel prize winners like Theodore Schultz and Kenneth Harrow and I hope future Nobel prize winners like Partha Dasgupta, who've been talking about this for decades on end, right? So I'm quite humble about this. All I'm doing is implementing the work of my gurus, basically these leading economists. And I think the business world and the people who are in it should recognize that there's a lot of history here that they need to bring to the table and they will be doing themselves.

Pavan Sukhdev:

And everyone is service if they collaborated and created one set of standards for how do we measure again. I mean, can you imagine if we didn't have the IFRS for multinational corporations, what a mess it would be like, what if there were 25 different initiatives trying to figure out how to report a financial performance for a multinational corporation? We'd have total chaos, and that's what we are unfortunately going to head towards if we don't get just pause for breath and say, "Okay, let's sit everyone together and come to one standard for how do we expand the world of financial reporting into the world of impact reporting." And then you should be hearing the voices of people like Professor [Joseph Athem 00:32:35] from Harvard University. He teaches at the Harvard business school. He's been saying this as well. I've been saying this from a practitioner's point of view, the idea that we should have one set of standards to work out impacts in the four major capitals. And by the way, when I say four capitals, again, this is not my invention.

Pavan Sukhdev:

These are the same four capitals that have been used and talked about by professors and, and Nobel prize winners like Theodore Schultz, Kenneth Arrow, [Collian Maller 00:33:01] is not a Nobel prize winner, passed away recently, but he and professor [inaudible 00:33:08] have written extensively on this topic of measuring all dimensions of capital and not just financial capital. So I think there's a lot of history here, which needs to be pulled together. And I think the business world would be well-advised to reflect that history and derive their new standards. And then you approach based on all of this research that is already available, thanks to the work of outstanding economists and analysts of the kind that I've mentioned.

Michael Torrance:

Do you believe Pavan that there will one day be a unified framework of that sort for value based accounting? And if so, what time horizon do you see before people get there?

Pavan Sukhdev:

I'm definitely a believer in this. So I think the work that's being done for instance, by the Value Balancing Alliance, by the Capitols Coalition, by the Impact Management Project, by the IMP, as it's called and by existing initiatives from earlier on, such as the IIRC, the International Integrated Reporting Initiative, and the building off the lovely foundations that have been laid by the Global Reporting Initiative of Alan White and Marjorie Kelly and others. So there's a lot here, which is historically available to us. I think we should just now collectively concentrate on pulling it together, right? This is not about making reputations or establishing prominence or preeminence or whatever. This is not about ego, right? This is about the exact opposite of ego. This is about recognizing that all of us in the interest of humanity and in the interests of society need to collaborate with urgency and bring out one set of standards.

Pavan Sukhdev:

And collaboration has much greater value, including economic value in this context than competition. There's no point in people competing, there's having my own firm and my own philosophy is collaborate aggressively as much as you can. And whenever we find someone on the same wavelength as we are, and trying to create something we say, "Can we help you? What can we do together? Can we write a paper together? Can we help you implement a platform because we already have one which is called Impact 360X."

Michael Torrance:

Yeah. Can you tell us a little bit more about Impact 360X? So what exactly is the platform and how does it work?

Pavan Sukhdev:

Yeah. It's basically a software as a service. So as you know, my firm's been in this space for the last decade almost, since 2011, 2012, where we've been working with companies doing this. What we decided a couple of years back is that, look, we need to scale because just the time that we are in, I mean, look at climate breakdown, look at COVID-19, look at all of these things that are happening around us. It's ridiculous for us to be moving at the slow pace that we are. The only way that we are going to achieve our mission to make sustainability accessible to all is to actually get all of the knowledge that we have onto one platform, and then let companies and eventually investors as well, access that platform. And that's what it is. Right now it's a corporate platform which enables any company in any one of the traditional sectors of the economy and we've mapped more or less 50 plus, 52 sectors as of now.

Pavan Sukhdev:

So literally, I mean, any company that's in the MSCI developed market index, and very soon any company that is listed in the MSCI ACWI index should be able to come to our platform and be able to work out its impacts. Not only that, but to be able to compare them with others in its sector. So it will know whether it's top quartile, second quartile or third quartile or whatever on climate change impacts per million dollars of revenue or water usage per million dollars of revenue, or air pollution per million dollars of revenue or whatever it needs to look at, or for that matter, human capital created per million dollars of revenue. It can work these things out and that's the power of the platform. So it's basically pulling together more than 60% years of research and development of algorithm writing, of data gathering, data cleansing, of writing code as well off late to make everything available on one platform.

Pavan Sukhdev:

And our use of technology is extreme. I mean, to calculate air pollution impacts, we basically logged into the NASA database for wind speeds and wind direction. So the NCAA, our database essentially provides us the wind speeds and wind directions which enables us to do the modeling of where the pollutants land, whether they are particles like PM 2.5 or 10 or molecules like SOx and NOx, where they land, what are the impacts of that on human health, as a result of increased ambient intensity. We use the WHO database for health correlation, basically the pollutants intensities correlations with disease likelihoods, that is from the WHO. And we use national databases for health costs. All of this is now available online. So basically at the press of a button, you can get these answers.

Michael Torrance:

That's fascinating. And just going back to the path towards an overarching standardized approach, the task force on climate related financial disclosure was a real catalyzing framework that has advanced the discussion in terms of climate change and there's a perhaps lesser known framework called the task force on nature related financial disclosures.

Pavan Sukhdev:

Nature related financial, yes. TNFD. That's right.

Michael Torrance:

How does that framework in your view relate to this overarching goal for having a standardized value based accounting approach and how does it relate to the work you're doing?

Pavan Sukhdev:

I think one will lead to the other. So as you're aware that the TCFD talks in terms of carbon quantities like CO2 equivalence, the task force for nature related financial disclosures would have to come out with different proxies for nature because nature isn't easily translated into one entity. I mean, biodiversity and ecosystems, essentially the living fabric of this planet, it's not a gas, so you can't convert it into CO2 or something like that, but you can express it in different ways and our own preferences to express it in terms of the economic value of ecosystem services, because that's a numerator that people understand, policymakers understand and C-suite executives understand. So we go with that in the absence of anything better, but let's see what the TNFD decides to do, but I'm hoping that they take the available. Like I said, it behooves us not to try and reinvent the wheel Not because it's a good or a bad idea, but because there's no time.

Pavan Sukhdev:

We need to use everything that's available. And right now what's available is the great work done recently by part of the [inaudible 00:39:19] group on biodiversity, the earlier great book done by my colleagues or the TEEB report, all that is available stuff, right. It's in the public domain. There's no charge for it. So let's use it. Let's make use of all of this good stuff that's sitting out there waiting for people to use it.

Michael Torrance:

And do you have any final thoughts Pavan for corporate leaders and about how they should be thinking about this topic?

Pavan Sukhdev:

Yeah. I have a thought and a plea. Competition is great, I'm from markets as well. I spent 26 years of my life trading, structuring, originating, selling all kinds of market instruments in my life and I understand markets and I understand competition, but what I have learned through these years is that collaboration is also a great force. Time has come for us to make use of, and leverage collaboration and create more economic value than we could have done by competing against each other. So let's get this into your thinking of the corporate leaders of today. Let's collaborate aggressively and fearlessly, right? And I think we will end up with an economy and a society, which is far better and far safer than the one that we have today.

Michael Torrance:

Very good. Thank you so much for your time.

Pavan Sukhdev:

Thank you. My pleasure.

Michael Torrance:

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