I am delighted to be here this evening. When I received the invitation from my friend Mr. Sashi Kumar I had only one question—will I be asked to wear those awful gowns and quirky hats associated with graduation ceremonies? On being assured of a more civilised dress code, I readily accepted.

It is actually a triple-header ballgame today as might be reported in Wikileaks—ACJ’s Convocation, World Press Freedom Day and the second Lawrence Dana Pinkham Memorial lecture.

The ACJ has quickly acquired a formidable reputation for itself—I say this as the father of a young man who joined ACJ two years back but quickly realised that he wanted to be a don and not a scribe.

This is the 20th anniversary of the World Press Freedom Day declared by the UN General Assembly and today we renew our faith in an independent media as a pillar of an open, liberal, democratic society and reaffirm that independence, whatever be the provocation and howsoever strong be the reason provided for some regulation every now and then, especially by the electronic media.

I know of Professor Pinkham only by reputation and clearly he was a man of great erudition, thoroughly progressive in his values as well as being unusual in having lived and worked not just in the USA but also in China and India. Not many can claim that distinction—not even Mr. Ram! Doing some background homework on Professor Pinkham I discovered that he was the son-in-law of Harry Dexter White generally acknowledged as one of the two founding fathers, albeit the junior one to John Maynard Keynes, of the Bretton Woods Institutions, namely the
IMF and the World Bank. White, it might be recalled is seen by many Americans as a Soviet spy—the bipartisan Moynihan Commission of Government Secrecy said as much in 1997 although Robert Skidelsky the author of the magisterial three-volume biography of Keynes is kinder to White when he says: “There is no question of treachery, the accepted sense of betraying one’s country’s secrets to an enemy. But there can be no doubt that, in passing classified information to the Soviets, White knew he was betraying his trust, even if he did not thereby think he was betraying his country”. Professor Pinkham bears a heavy cross or deserves kudos depending on which side of the fence you are for mentoring a young Mr. Ram, one of ACJ’s founder Trustees, over four decades ago.

II

One of the most celebrated essays of the 20th century was Isaiah Berlin’s *The Hedgehog and the Fox*. The noted philosopher drew upon a fragment of verse by the Greek poet Archilocus—“the fox knows many things, but the hedgehog knows one big thing”—to delve into Tolstoy’s view of history¹. Tolstoy, of course, is of immense relevance to us in India because of his profound influence on the Mahatma. Today, I want to use this metaphor to reflect on the current debate on unbridled economic growth and environmental conservation. I suppose metaphors from the animal kingdom are only to be expected from a minister dealing with wildlife issues on a daily basis! Incidentally, the famous distinction between “positive” and “negative” liberty relevant to any discussion on freedom for the individual and of the press was first drawn by Berlin himself in a set of lectures at Oxford in 1958.

My point is simple—India needs to be liberated both from the “high GDP growth hedgehogs” and the “conservation at all costs hedgehogs”. I don’t exaggerate and I am not caricaturing. The population of prickly hedgehogs of both varieties is sizeable, with a footprint on the public discourse that is disproportionate to their numbers. Moreover, the Internet and other social media has greatly facilitated the emergence of a networked community of hedgehogs. But what India needs more of is the smooth fox—cunning and crafty—to find the balance between high growth and enduring conservation. The hedgehog is an ideological crusader supremely convinced of the rightness of the cause while the fox will admit of doubt and uncertainty. The hedgehog does not know how to

¹ The American academic Gerald Larson has recently written a most interesting article on Gandhi as a hedgehog and Tagore as a fox in the Rabindranath Tagore 150th birth anniversary commemoration volume brought out by Marg Publications.
make concessions to the other point of view while the fox will use linguistic qualifiers liberally—“yes but”, “maybe”, “perhaps”. The hedgehog has feet on the accelerator but the fox works on the clutch forever changing gears to deal with varying traffic conditions.

But don’t get me wrong. Hedgehogs actually have made, and continue to make great contributions. Look at the world of science and literature which is full of people who are singularly focused and reach the Mt.Everest of accomplishment in their respective fields. At the same time, what I am really driving at is that sticking to one big idea is an anathema in policy making in an open society of astounding diversity because the hedgehog view is unresponsive and inattentive to the untidiness and complexity of real life.

III

Environmentalists just don’t get it as far as economic growth is concerned. True GDP growth rates have their limitations as a measure of progress and welfare. But that is the best summary metric we have. It is imperfect but useful nevertheless as a broad indicator of how the economy is performing. Now, why should we even be bothered with sustaining high GDP growth rates, growth rates in the region of at least 8-9% per year in real terms—that is, after adjusting for inflation?

Very simply, high GDP growth rates help generate revenues for the government that could then be used in programmes deemed essential. Thus, between 2004 and 2009, the launch of the National Rural Employment Guarantee Act and the loan waiver was made possible by the average annual real GDP growth rate recorded of 8.6%. More growth means more revenues for governments. In just five years between 2005/06 and 2010/11, for instance, the Central government’s gross tax revenues doubled. More revenues means increased spending on welfare programmes—I leave aside the larger and equally important question of how effectively these revenues are actually being spent.

High GDP growth rates fulfil yet another need---they help generate jobs, provided, of course, the structure of growth itself is labour-absorbing. Some informed estimates are that India’s labour force will increase by anywhere between 80 million and 110 million over this decade—a staggering addition, as compared to just 15 million for China. 40% of these jobs in India have to be created outside the agricultural sector—

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2 The Planning Commission and ILO estimate is 80 million while Goldman Sachs estimates it at 110 million—the increase being attributed to increases in the labor force participation rate due to a favourable age structure.
that is in industry and services. Given this demographic reality, a high GDP growth rate drawing on high growth in agriculture and manufacturing especially and better spread geographically across the country assumes special significance.

A high GDP growth rate requires investments—both public and private. These investments will materialise only if there is clarity and consistency in policy. Energy is a key requirement. But if environmentalists oppose hydel projects on R&R grounds, coal projects on deforestation grounds and nuclear projects on risk factors, how will India generate the energy needed to sustain a high GDP growth rate. It is the height of romantic delusion—and a dangerous one at that—to think that a country of over 1.2 billion that added 18 million annually over the past decade can meet its energy requirements through solar, wind or biomass energy. But that is exactly what most environmentalists would have us believe.

IV

Likewise, the growth-wallahs just don’t get it as far as the imperative for environmental protection is concerned. Why can’t we follow the “grow now, pay later” approach as the growth-fetishists often advocate? I would suggest four reasons why such an approach is not acceptable. First, increasingly environmental campaigns and movements across the country reflect basic livelihood concerns of tribal and other disadvantaged sections of society. Second, air and water pollution is beginning to have serious public health impacts in state after state. Third, climate change is a reality and will affect India in a more profound manner than any other country because of our vulnerabilities across so many dimensions—monsoon, coastal areas, forests, glaciers to name just a few. Fourth, we must bequeath something to future generations since unlike in most parts of the world, population will continue to grow in India as we move to reap our demographic karma by adding at least 400-500 million by the middle of this century.

If the environmental activists do not fully appreciate the absolute essentiality of expanded wealth creation, the growth-jehadis fail to see the wider ecological context in which growth or for that matter the existence of the economic cycle and human life cycles inevitably depend. In a largely tropical country with unevenly distributed rainfall, trapping and saving water is vital for towns as much as villages. The centrality of soil conservation and of keeping the fertile land productive needs no
emphasis. Less well-known but equally critical are a whole range of ecosystem services, of mangroves or of wetlands. If the growth-champions were to pause a bit, they will see that many of their premises come from an early 20th century delusion that technology and growth have made nature redundant.

V

Thus, this much should be self-evident and obvious—that India needs to straddle both worlds at the same time—the world of high GDP growth and the world of meaningful ecological security. But what is self-evident and obvious often tends to get forgotten. And this is where, I might add parenthetically, you media types come in. Hedgehogs make for good copy with their clarity and certainty. Foxes don’t with their ambiguity and their “on the one hand and on the other” approach.

Thus, in certain sections of the media, the growth hedgehogs are champions of a new India while the enviro-hedgehogs are Luddites3 intent on sabotaging India’s emergence as a major world power. In some other sections, the enviro-hedgehogs are heroes (and quite frequently heroines) saving India from loot and plunder, while the growth-hedgehogs are harbingers of doom and destruction. It is interesting that the growth-hedgehogs are acclaimed largely in the English-speaking media (especially in what are called the “pink papers”) whereas the enviro-hedgehogs are the toast of the regional and vernacular media. Here is a topic for a doctoral dissertation, no less.

To get back to the question of balance, the virtue and the need for it is incontrovertible. Working the balance, however, is easier said than done. Quite often consistency becomes a casualty since a solution is sought to be found based on specific circumstances and conditions. But I feel that if there is clarity and transparency, the charge of lack of consistency can be effectively countered. And this is precisely what I have ventured to do through two specific innovations.

The first is through the practice of “speaking orders”. It is not for me to say whether I have succeeded or not but I am encouraged by what Pratap Bhanu Mehta wrote thus in The Indian Express (a newspaper that is a

3 Actually the word “luddite” is used very loosely these days. Luddites, as E.P. Thompson has argued persuasively in *The Making of the English Working Class*, acted more from a sense of self-preservation rather than from an atavistic fear of technological change itself. They were selective in their opposition—unlike today’s counterparts.
growth hedgehog I might add and therefore not always friendly to me) on February 17th, 2011: “The cabinet needs to adopt a practice perfected by Jairam Ramesh: govern with what are called speaking orders. These are orders that clearly and publicly explain why certain decisions have been taken (whether the reasons are compelling or not can be debated). But at least government will not fall into the trap leaving it unclear who took decisions and why”. In the past two years, I have issued such “speaking orders” on public issues like Bt-brinjal, Vedanta, Posco, Jaitapur, Navi Mumbai and Adarsh. I see it as a way of communicating to the public the contours of the middle path. Not everyone is happy of course. But at least all motivations are in the public domain for critical analysis.

The second innovation is the system of public consultations. This began with the Bt-brinjal case where over a thousand people attended such half-day long interactions in Bangalore, Hyderabad, Kolkata, Nagpur, Ahmedabad, Chandigarh and Bhubaneshwar. Then when the CRZ-1991, that is the Coastal Regulation Zone Notification, 1991 was being redrafted public meetings were held in Chennai, Puri, Kochi, Goa and Mumbai. A third time I went on Bharat Darshan in search of the middle path was when the Green India Mission was being finalised and public views were sought in Guwahati, Vishakapatnam, Dehradun, Mysore, Pune, Bhopal and Jaipur. All these public consultations were organised by the Ahmedabad-based Centre for Environment Education and all proceedings were video-graphed and put on the Ministry’s website. It is a back-breaking process and very often the public consultations can easily get out of hand as I discovered on a couple of occasions since we Indians as a rule are excellent talkers but very poor listeners. But they are an important means of establishing contact with a larger constituency and for engaging them in the process of decision-making.

I think it was the late Professor Nurul Hasan who once reportedly said—Indians are a unique bunch; when confronted with a choice they will try and take both! Well, that luxury will not always be available and I am afraid that tough, unpopular choices will have to be made. Not always will conflicting objectives be reconcilable. That is why my approach has been to make the trade-offs explicit and make the choice in full public glare. This approach will work in the short-term but what we need to do is to develop a methodology that integrates the costs and benefits of environmental protection fully into our GDP calculations. What does 10% annual real rate of GDP growth that is now within our grasp really mean, if we consider the costs of environmental damage, depletion of natural resources, and pollution that this growth will entail? The only way to answer these critical questions in an objective manner is to obtain
clear numbers of the environmental costs that the growth process entails – i.e., estimate “green” national accounts.

In this connection, I am happy to report that we are setting up an expert group to develop a roadmap for India to be able to report “green” national accounts by the year 2015. I have succeeded in convincing Professor Sir Partha Dasgupta of Cambridge University, perhaps the world’s leading luminary and expert in the field of environmental economics, to chair this expert group, which will also have a couple of very distinguished economists. The work of this “blue-ribbon panel” will be of great importance in our being able to follow a balance between rapid growth and conservation since, quite frankly, what we cannot measure we cannot monitor and what we cannot monitor we cannot manage.

VI

Working the balance (which, I submit, is somewhat different from the middle path which is a sort of a 50:50 approach) also needs regulatory innovations. That environmental protection requires regulation is beyond doubt. That regulations and laws themselves need to keep pace with the times to reflect the unique demographic pressures and developmental imperatives we confront also cannot be denied. But can we have regulations without regulators because very often the regulators can become a source of needless harassment and corruption? We must think creatively. Of course, the growth hedgehogs would want the regulations themselves to go or be diluted or be subject to self-certification all of which are unacceptable. The enviro-hedgehogs would like an army of inspectors to police the implementation of the regulations.

A beginning is being made to move to a market-friendly system of regulation. With the help of four of the world’s leading economists at MIT, we have launched a pilot project in Tamil Nadu, Gujarat and Maharashtra to implement regulations for air pollutants. This market-based system is broadly akin to how the USA dealt with the acid rain problem in the late eighties and early nineties through the introduction of tradable permits. It goes beyond the traditional command and control “inspector-raj” systems, which have inherent limitations that we know. These innovative systems leverage technology and harness markets to ensure better compliance with our environmental laws and regulations.
The scheme will fundamentally transform how we do pollution control. It will rely on online real-time monitoring of pollution loads of industrial units, based on which a system of “emissions trading” will be established. Emissions trading will allow the regulator to set a cap on the aggregate level of pollution permitted, and then allow a self-regulating system to ensure that pollution does not exceed this cap.

VII

Working the balance also demands basic institutional changes. Writing in the Indian Express (yet again!) on March 25th, 2011, Jerry Rao had this to say: “Why does not Jairam Ramesh as part of his legacy to the country remove the power of discretionary approvals from his ministry and hand it over to an independent Environment Commission to be statutorily established and charge this commission with the tasks of granting and monitoring approvals? ....In giving up control, Ramesh will meet resistance from many in the political and bureaucratic establishment. But if he wishes to go down in Indian history as a Sher Shah, a Munro or a Curzon, this is his golden opportunity. Let’s hope he grasps it”.

Well, much as I admire Sher Shah, Munro and Curzon I am under no illusions that I am anywhere close to achieving or even hope to achieve even a very miniscule fraction of what these great men accomplished. I am also not quite sure if a medieval monarch or two imperial administrators are the best role models in our own democratic age. But a small beginning is being made. We are now in the process of setting up a National Environmental Appraisal and Monitoring Authority (NEAMA). This will be a professional, science-based autonomous entity tasked with environmental appraisals and monitoring of compliance conditions. Once appraised by NEAMA, projects would be sent with a recommendation to the Minister of Environment and Forests for approval.

This final approval by the Minister is necessary to ensure that the principle of executive accountability is maintained. Jerry Rao will not like it but when the Minister of Environment and Forests is pilloried in Parliament on some decision or the other, the Minister cannot take recourse to the “but NEAMA is totally independent of me” type of argument. And in any case at least in the case of a political figure even if it is a member of the Upper House, there is some sense of public accountability totally absent in a purely technocratic body---the
functioning of an independent Genetic Engineering Approval Committee (GEAC) in my own ministry prior to 2009 and whose functioning people like Jerry Rao would approve of, is a good case in point.

NEAMA will mark a major improvement over the current system (wherein the Ministry does appraisal and approval of new projects) in several ways. First, NEAMA will be a full time entity of professionals, tasked with environmental appraisals on an ongoing basis, instead of the current system of appraisals done by environmental appraisal committees that are ad hoc and meet about once a month. In this sense, it will convert a slow ‘batch’ process into a continuous process, bringing greater rigour in the appraisal process, while avoiding unnecessary delays. Second, the creation of NEAMA will address the ‘conflict of interest’ issue by separating the process of appraisal and approval. While NEAMA will be tasked with appraisal of new projects, the Ministry will be responsible for final approval. Third, NEAMA will maintain its own real-time and time-series databases on pollution loads across the country, which it will use to appraise proposed projects, instead of relying on data provided by project proponents as is the current practice. This will provide much greater objectivity in the appraisal process. Fourth, NEAMA will have a well-equipped system to ensure compliance with the conditions imposed on new projects that are granted environmental clearance.

VIII

I spoke earlier of the role of the media in eulogising hedgehogs and giving somewhat short shrift to foxes. That is because today’s media is increasingly impatient with ambiguity, is increasingly intolerant of shades of grey seeing the world only in terms of black and white. This attitude vitiates the public discourse and debate and does not allow for easy compromise and consensus. As I mentioned earlier, hedgehogs being more persuasive and articulate and being purveyors of a single and simple powerful message are loved by the media. But foxes are self-critical eclectic thinkers open to updating or reworking their beliefs and view of the world when faced with contrary evidence and views. Hedgehogs tend to stretch their one good idea—and the only one they have—but beyond a point the stretch becomes counter-productive and like all stretches reaches a breaking point.
I am convinced that a “working the balance” approach is the only way ahead. But this should not mean that we refuse to recognise that there may well be occasions when we will be faced when growth and conservation goals are irreconcilable. There are limits to this having your cake and eating it too. A coal mine bang in the middle of a very dense forest area or in a protected area like a tiger reserve is simply unacceptable and the nation has to accept that unpleasant reality. When this happens, a decision has necessarily to be taken that will displease one side or the other. Bouquets will be offered from one side and brickbats thrown from the other. And there will be no consistency—today’s bouquet offerer can well and indeed has ended becoming tomorrow’s brickbat hurler and vice versa.

Twenty years ago, India embarked on its historic economic reforms programme. Fiscal sustainability was one of the three pillars of this programme—the other two being abolition of industrial licensing and freeing international trade from administrative controls. Today, as we look ahead to the next two decades, we must not only be anchored in fiscal prudence but equally look the ecological sustainability of our growth trajectory. Is a 9%+ real rate of GDP growth envisaged as the target for the 12th Five Year Plan that will commence on April 1, 2012 environmentally acceptable? What will that growth, essential as it is, demand from our forests and our water resources, for instance? What will it take to ensure that this growth is along what is these days being called “a low-carbon” pathway. If 100,000 MW of power capacity has to be added to ensure a 9%+ GDP growth rate, what should its fuel mix be so as to ensure that we don’t end up repeating the same mistakes that the USA and China have made—after all, a perennial latecomer like India does have advantages that it can learn from others?

IX

I started with the great philosopher Isaiah Berlin. Let me end with one of my favourite authors the distinguished palaeontologist Stephen Jay Gould whose last book before his untimely death in 2002 was called The Hedgehog, the Fox and the Magister’s Pox. In his Introduction to this wonderful book, Gould recalls Erasmus’s version of the Archilochian contrast: “Multa novit vulpes, vernum echinus unum magnum” or roughly, “The fox devises many strategies; the hedgehog knows one great and effective strategy. He goes on to write: “The power and attraction of Archilocus’s image lies, rather obviously in its two levels of metaphorical meaning for human contrasts. The first speaks of
psychological styles, often applied for some practical goals. Scramble or persist. The second, of course, speaks to favoured styles of intellectual practice. Diversify and colour or intensify and cover”. I am, in this lecture, concerned with the former where pragmatism, flexibility and skill in reinvention is the constant need. Of course, I take Gould’s caveat—that too great a flexibility may lead to survival of no enduring value. You have to watch out however--being a fox should not degenerate into behaving like a chameleon.

This being a convocation address, I suppose I must end with some advice to all of you youngsters about to enter that greatest temple of learning (and earning)—the University of Life. The best advice I can give you in light of what I have said today is read Berlin. Be “hedgehoggy” but develop the traits of a fox. And a fox need not be looked down upon, as we often tend to do. I can do no better to convince you of what a fox could mean when I recall that joke—blasphemous to recall in Chennai perhaps. It goes like this: Q: Who is the only Indian politician to have a Hollywood studio named after him; A: Rajaji with the studio being 20th Century Fox!

That is as good a place to end this lecture as any.

Thank you.
In some countries, building is restricted or completely banned in the area of farmland or woods and parks which surround a community. More and more companies are using boxes, cartons, and cans which can easily be decomposed by organisms such as bacteria, or by sunlight, sea, water, etc., for their products. The burning of some fuels creates carbon dioxide, carbon monoxide, sulfur dioxide, and methane which rise into the atmosphere. Foxes, on the other hand are skeptical about grand theories, diffident in their forecasts, and ready to adjust their ideas based on actual events. The aggregate success rate of Foxes is significantly greater, Tetlock found, especially in short-term forecasts. And Hedgehogs routinely fare worse than Foxes, especially in long-term forecasts. They even fare worse than normal attention-paying dilettantes apparently blinded by their extensive expertise and beautiful theory. The value of Hedgehogs is that they occasionally get right the farthest-out predictions civil war in Yugoslavia, Saddam’s invasion of Kuwait, the collapse of the Internet Bubble. But that comes at the cost of a great many wrong far-out predictions Dow 36,000, global depression, nuclear attack by developing nations. The hedgehog and the fox revisited: some further reflections on the growth-environment debate in India. Jairam Ramesh Minister of State (Independent Charge), Environment & Forests Government of India. Text of the Lawrence Dana Pinkham Memorial Lecture delivered on the occasion of World Press Freedom Day and Convocation of the Asian College of Journalism, Chennai, May 3rd, 2011.