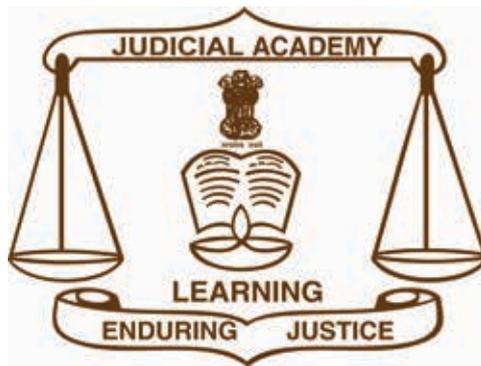
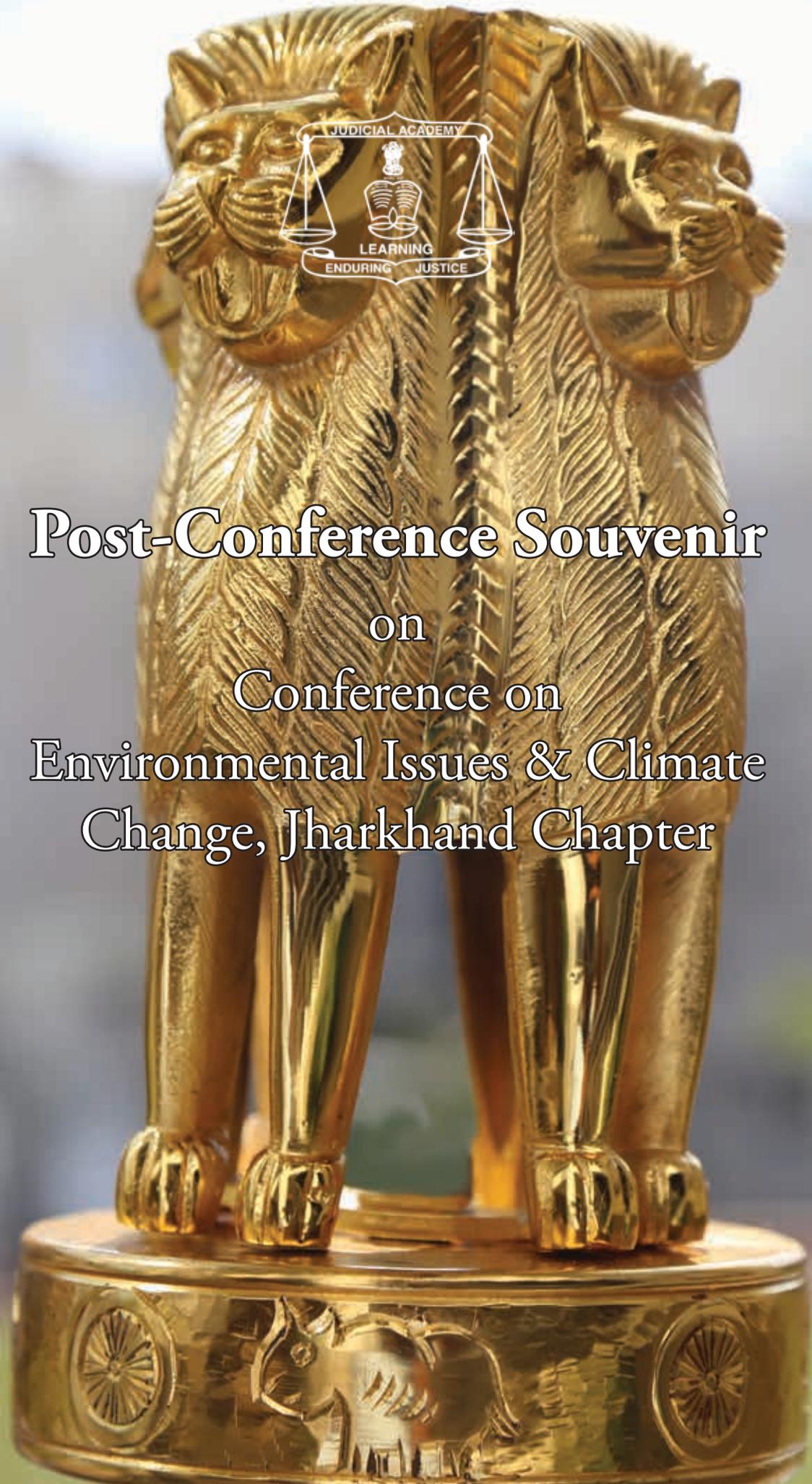


Judicial Academy Jharkhand

POST-CONFERENCE SOUVENIR

ON
CONFERENCE ON ENVIRONMENTAL ISSUES & CLIMATE CHANGE
JHARKHAND CHAPTER





Post-Conference Souvenir
on
Conference on
Environmental Issues & Climate
Change, Jharkhand Chapter



DEPARTMENT OF

Environmental Jh

Hon'ble Mr. Justice Anil R. Dave
Judge
Supreme Court of India

Hon'ble Mr. Justice Swatanter Kumar
Chairman
National Green Tribunal

Venue: Dr. B.R. Ambedkar Law Centre, National Academy of Legal Research and Advocacy



HIGH COURT OF JHARKHAND
JUDICIAL ACADEMY JHARKHAND
NATIONAL GREEN TRIBUNAL &
REST, ENVIRONMENT & CLIMATE CHANGE, GOVT. OF JHARKHAND



Legal Issues and Climate Change Jharkhand Chapter

Chief Guest
Hon'ble Mr. Justice T.S. Thakur
Judge, Supreme Court of India

Guests of Honour
Hon'ble Sri Raghubar Das
Chief Minister
State of Jharkhand

Hon'ble Sri Prakash Javadekar
Minister of State, Environment,
Forest & Climate Change

Hon'ble Mr. Justice V. Ramaswami Sastri
Chief Justice, High Court of Jharkhand cum
Patna Bench, Patna

Hon'ble Mr. Justice R.R. Prasad
High Court of Jharkhand,
Patna Bench, Patna





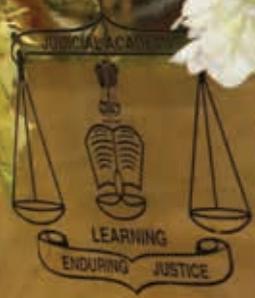
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Hon'ble Sri Prakash
Minister of State
Forest & Environment

Hon'ble Sri Prakash
Minister of State
Forest & Environment



Speech by

SRI RAGHUBAR DAS

Chief Minister, Govt. of Jharkhand

न्यायिक अकादमी भवन के उद्घाटन एवं पर्यावरण और जलवायु परिवर्तन विषयक सम्मेलन के अवसर पर मंच पर उपस्थित सर्वोच्च न्यायालय के माननीय न्यायमूर्ति श्री टी0 एस0 ठाकुर जी, सर्वोच्च न्यायालय के माननीय न्यायमूर्ति श्री अनिल आर0 दवे जी, राष्ट्रीय हरित प्राधिकरण के अध्यक्ष माननीय न्यायमूर्ति श्री स्वतंत्र कुमार जी, झारखण्ड उच्च न्यायालय के मुख्य न्यायाधीश माननीय श्री बिरेन्द्र सिंह जी, मंच पर बैठे हमारे न्यायिक अकादमी के अध्यक्ष एवं झारखण्ड उच्च न्यायालय के माननीय न्यायमूर्ति श्री आर0 आर0 प्रसाद जी, सभागार में उपस्थित सर्वोच्च न्यायालय के माननीय न्यायमूर्ति कलिफुल्ला जी, सर्वोच्च न्यायालय के माननीय न्यायमूर्ति श्री मदन बी. लोकुर जी, सर्वोच्च न्यायालय के माननीय न्यायमूर्ति इकबाल जी, सर्वोच्च न्यायालय के माननीय न्यायमूर्ति श्री ऐ0 के0 शिकरी जी, माननीय न्यायमूर्ति श्री शिव कीर्ति सिंह जी और झारखण्ड उच्च न्यायालय एवं सर्वोच्च न्यायालय की पूर्व माननीय न्यायमूर्ति श्रीमती ज्ञान सुधा मिश्रा जी, हमारे राज्य के मुख्य सचिव श्री राजीव गौबा जी, झारखण्ड सरकार के विभिन्न विभागों के प्रधान सचिवगण, न्यायिक अकादमी के सभी सम्मानित सदस्यगण, इस सभागार में बैठे राज्य के सभी वरिष्ठ अधिवक्तागण और इस दो दिवसीय सम्मेलन में उपस्थित सभी देवियों, सज्जनों और मीडिया के साथियों। सर्वप्रथम इस सुन्दर न्यायिक अकादमी के निर्माण के लिए मैं "भवन विभाग" को साधुवाद और धन्यवाद देना चाहता हूँ जिसने एक सुन्दर न्यायिक अकादमी परिसर के निर्माण का कार्य किया। मैं धन्यवाद देना चाहता हूँ झारखण्ड उच्च न्यायालय और वन विभाग को भी जिन्होंने पर्यावरण और जलवायु परिवर्तन के मुद्दे पर झारखण्ड में दो दिवसीय सम्मेलन आयोजित करने का कार्य किया और मुझे पूर्ण विश्वास है कि इस दो दिवसीय सम्मेलन से पर्यावरण और विकास के बीच एक सामंजस्य स्थापित होगा जिससे कोई ऐसा हल निकलेगा जो इस अमीर राज्य की गरीब जनता के विकास एवं गरीबी उन्मूलन में सार्थक सिद्ध होगा। भारत एक विकासशील देश है यदि भारत को भी विकसित देश बनना है तो इसके लिए आर्थिक प्रगति जरूरी है जिसके द्वारा ही हम विकास करके इस देश को, जो कि 67 वर्ष की आजादी के बाद भी करोड़ों मानवों और इतनी सम्पदा के रहते हुए भी आज विवश है, भूखा है उसकी चिंता हमें करनी चाहिए। मैं व्यक्तिगत रूप से मानता हूँ हमारा विकास पर्यावरण के अनूकूल होना चाहिए। क्योंकि यह बात भी सही है कि आज स्वच्छ हवा, स्वच्छ जल, स्वच्छ पर्यावरण के बारे में हम निश्चिन्त नहीं हैं। पर्यावरण के स्तर में इतनी गिरावट आ गई है जो जीवन के हर क्षेत्र में हमें दिखाई दे रही है। वर्तमान में जो विभिन्न प्रकार की बीमारियाँ प्रकट हो रही हैं, वे कहीं ना कहीं पर्यावरण के प्रदूषण का ही परिणाम है। इसलिए हम सब को इस बात को समझते हुए कोई एक रास्ता जरूर निकालना चाहिए जिससे पर्यावरण और विकास में सामंजस्य स्थापित करके इस राज्य को विकसित देश की श्रेणी में लाया जा सके। यह स्वाभाविक ही है कि जब पर्यावरण की स्थिति खराब होगी तो इसकी सुरक्षा के प्रति लोगों की चिन्ता बढ़ेगी और हमें लगता है कि इस बिन्दु पर माननीय न्यायालय व माननीय न्यायमूर्ति तक भी चिन्तित हुए है। देश की जनता भी चिन्तित है। जलवायु परिवर्तन और वैश्विक तापमान वृद्धि, आज पूरे विश्व में गंभीर समस्या के रूप में उभर कर सामने आ रहे हैं। लेकिन हमें यह भी देखना जरूरी है कि क्या इसके लिए हम जिम्मेदार हैं ?

जैसा कि हम सभी को पता है कि विकसित देशों के द्वारा बिना पर्यावरण की परवाह किए अत्यधिक तेजी से आर्थिक वृद्धि प्राप्त करने हेतु की गई गतिविधियों के कारण ही आज जलवायु परिवर्तन की समस्या उत्पन्न हुई है और हमें यह शिक्षा दी जाती है की पर्यावरण को आप नियंत्रित करें। जो विकसित देश है वो पूरे विश्व में इस तरह की बात भी कह रहे हैं इसे भी हमें ध्यान में रखने की जरूरत है। हम झारखण्ड की बात करें तो झारखण्ड

की भूमि पर कुदरत बहुत मेहरबान है। राज्य की 30 प्रतिशत भूमि वनों से आच्छादित है, 76 प्रतिशत आबादी प्राकृतिक सौन्दर्य तथा झरनों के बीच गाँव में निवास करती है। ऐसा कौन सा खनिज है जो यहाँ नहीं मिलता है, चाहे वह सोना हो, या लोहा हो, कोयला हो या तांबा इत्यादि हो। इन सभी का असीम भंडार हमारी धरती के गर्भ में मौजूद है। लोहा तथा कोयला का सर्वाधिक भंडार इस राज्य में है। विकास मानव सभ्यता का एक अभिन्न अंग है तथा एक सतत् प्रक्रिया है। मेरा व्यक्तिगत रूप में मानना है कि प्राकृतिक संसाधनों का शोषण नहीं होना चाहिए। प्राकृतिक संसाधनों का दोहन करते हुए एवं अपनी आवश्यकताओं को पूरा करते हुए हमें अपने आने वाली पीढ़ी की भी चिन्ता निश्चित रूप से करनी चाहिए। विकास योजनाओं के क्रियान्वयन तथा खनन कार्य में लाखों पेड़ काटे भी जाते हैं। यह बात भी सही है कि पेड़ों की कटाई से उत्पन्न ग्लोबल वार्मिंग से पूरा विश्व चिंतित है। मानसून पर बुरा असर पड़ता है। पिछले 5 वर्षों में झारखण्ड लगातार सुखे की स्थिति से जूझ रहा है। साथ ही साथ शहरीकरण और औद्योगिकरण के कारण भी नदियों में प्रदूषण की समस्या लगभग हर राज्य झेल रहा है। हमारे राज्य में भी अधिकतर शहरों में शिवेज ट्रीटमेंट प्लान्ट तथा भूमि संरक्षण, जैसा कि स्वतंत्र कुमार जी कह रहे थे, हम करने जा रहे हैं। नवम्बर महीने से ही राँची के शिवेज ट्रीटमेंट प्लान्ट का काम शुरू हो जाएगा। राज्य की नदियों के प्रदूषण का कारण यह है कि बड़े-बड़े प्लान्ट अपना कचड़ा बिना शिवेज ट्रीटमेंट के उनमें डाल देते हैं। खनन राज्य होने के कारण सी0 सी0 एल0, बी0 सी0 सी0 एल0 के क्षेत्र में, हम देखें तो कोल वासरी से निकला पानी दामोदर नदी को काला तथा लौह खनिज क्षेत्र के पश्चिमी क्षेत्र को देखे तो, पानी का लाल होना पाया जाता है। विडम्बना यह है कि झारखण्ड के खनिज से निकले लाभ देश के अन्य राज्यों को मिलते हैं परन्तु प्रदूषण की मार केवल हमें झेलनी पड़ती है। अगर कोयला खदानों पर हम कार्यवाही करें तो इनके बन्द होने से पूरे देश में विद्युत का संकट उत्पन्न हो सकता है। आवश्यकता इस बात की है की हम विकास और पर्यावरण में निश्चित रूप से सामंजस्य स्थापित करते हुए, पर्यावरण को नुकसान पहुँचाए बिना विकास का पहिया सतत् आगे बढ़ाते रहें। और यही कारण है कि सरकार ने कोयले के भंडार के रहने के बावजूद भी वैकल्पिक ऊर्जा, सौर ऊर्जा को प्राथमिकता दी है। देश ही नहीं एशिया का प्रथम सौर न्यायालय जिसकी चर्चा हमारे मुख्य न्यायाधीश कर रहे थे, जिसमें हमारे न्यायमूर्ति पटेल साहब का काफी सहयोग रहा है, की स्थापना का गौरव झारखण्ड जैसे राज्य को ही प्राप्त हुआ है। आने वाले वित्तीय वर्ष में 1200 मेगावाट हमारी सरकार की प्राथमिकता है, जो संथाल परगना के क्षेत्र में है, जो पश्चिम जिला के क्षेत्र है उनमें हम सौर ऊर्जा के माध्यम से गाँवों में वहाँ बिजली देने की व्यवस्था करने जा रहे हैं। इसी तरह झारखण्ड में पर्यावरण को बचाए रखने के लिए कई ठोस कदम हमारी सरकार ने उठाये हैं। वृक्षारोपण पर विशेष जोर दिया गया है। 2001 में वनों का क्षेत्रफल 22531 वर्गकिलोमीटर था, अभी मैं आपको 2013 के आंकड़े बताऊँ तो यह 23471 वर्गकिलोमीटर हो गया है। राष्ट्रीय हरित प्राधिकरण के आदेश को हम इस राज्य में सख्ती से उसका पालन करवा रहे हैं। वृक्षारोपण के प्रति भी आम जनता में रुझान बढ़ाने के लिए हमने इस वित्तीय वर्ष में मुख्यमंत्री जन वन योजना लागू किया है। इस योजना के तहत अपनी भूमि पर वृक्ष लगाने वालों को सरकार द्वारा अनुदान की राशि दी जा रही है। जैसा की आप सब को पता है गंगा नदी बंगाल की खाड़ी में गिरने से पहले राज्य के साहेबगंज जिले में 83 कि० मी० का सफर तय करती है उस गंगा को भी, नमामि गंगे, जो कि भारत सरकार की योजना के अन्तर्गत लाना भी हमारी सरकार की प्राथमिकता है। उस 83 कि० मी० की गंगा को प्रदूषण मुक्त करने के लिए पहले ही सरकार ने 150 करोड़ रुपये की स्वीकृति दे दी है। 150 करोड़ रुपये प्राथमिक प्रक्रिया में है और यह हमारा संकल्प है कि झारखण्ड देश का पहला राज्य बनेगा जहाँ हम नमामि गंगे की योजना को पायलट प्रोजेक्ट के रूप में अपने आदरणीय प्रधान मंत्री जी के सपने को पूरा करने का काम करेंगे। अभी-अभी दवे साहब ने अपनी भूमि के बारे में श्लोक के द्वारा हम सबका ध्यान आकर्षित किया। भारत एक ऐसा देश है कि जहाँ हम भूमि को माता कहते हैं। यह भूमि हमारे लिए धर्म भूमि है, हमारे लिए वात्सल्य भूमि है। नदियाँ केवल पीने हेतु पानी देने या फिर खेती हेतु पानी देने वाली जल वाहनियाँ ना हो कर हमारी लोकमाता है। गाय केवल उपयोगी पशु ना होकर हमारे यहाँ गौ माता है। इस प्रकार प्रकृति की ओर देखने की जो हमारी

संस्कृति है, वो भोग वासना से सनी हुई नहीं है बल्कि अगाध भक्ति भाव और आत्मीयता से ओत प्रोत है। इसलिए मैं आप सब से भी अनुरोध करूँगा की इस भोगवाद की संस्कृति में जहाँ हम देख रहे है की भौतिक वस्तुओं का अधिक से अधिक उत्पादन हो रहा है और दूसरी ओर हमारे नैतिक जीवन में गिरावट आ रही है, जीवन जीने की शैली को बदलने की जरूरत है। हमें संसाधनों का उतना ही संयमित रूप से प्रयोग करना चाहिए ताकि हम देश के करोड़ो मानव जो भूखे हैं उनकी भी भूख मिटा सके और इतना कहते हुए मैं झारखण्ड उच्च न्यायालय के मुख्य न्यायाधीश एवं उपस्थित अन्य न्यायमूर्तिगण एवं सरकार के अधिकारीगण से अनुरोध करता हूँ कि वे जिस आपसी सामंजस्य से राज्य में न्यायपालिका को अब्बल लाने का प्रयास कर रहे हैं, उसी प्रकार से दो दिन के अन्दर कोई ऐसा माध्यम निकालें जिससे कि पर्यावरण को भी सुरक्षित रखा जा सके एवं विकास भी बाधित न हों, धन्यवाद।

मुख्य न्यायाधीश साहब ने प्रधानमंत्री जी की भी सभा में भी यह बात कही थी। मैं आपको आस्वस्त करना चाहता हूँ की जिस प्रकार भवन विभाग ने समय पर इस भवन का निर्माण पूरा कर लिया उसी प्रकार उच्च न्यायालय का नया भवन भी समय पर निर्मित होगा और इसके साथ साथ उच्च न्यायालय भी पूरी तरह से सौर ऊर्जा से संचालित होगा। उच्च न्यायालय ही नहीं चालीस सरकारी भवनों पर चाहे प्रोजेक्ट भवन हो, चाहे नेपाल भवन हो, जिले के समाहरणालय हो ऐसे 40 भवनों पर भी सौर ऊर्जा हमारी सरकार की प्राथमिकता है। काम हमलोगों ने शुरू भी कर दिया है। न्यायपालिका का सम्मान करते हुए मुझे खुशी है कि मुख्य न्यायाधीश बिरेन्द्र सिंह जैसा मुख्य न्यायाधीश हमारे उच्च न्यायालय को मिला पटेल जैसे अन्य जो हमारे न्यायमूर्ति हैं वैसे न्यायमूर्ति मिले यहाँ हमने मिलकर एक परिवार की तरह न्यायपालिका के क्षेत्र में, जो आगे बढ़ने का संकल्प लिया है उसमें निश्चित रूप से सफल होंगे।

बहुत बहुत धन्यवाद!





Speech by

HON'BLE MR. JUSTICE T.S. THAKUR

Judge, Supreme Court of India

Sri Raghubar Das ji, Chief Minister of Jharkhand, My esteemed brother Justice Dave, Justice Swatanter Kumar, Sri Virender Singh Ji, Chief Justice of Jharkhand, Justice Kalifulla, Justice Eqbal, Justice Shiva Kirti Singh, Justice Gyan Sudha Mishra, Judges of High Court of Jharkhand, Former Judges of the High Court of Jharkhand, Chief Secretary of the state of Jharkhand, Senior Officers, Judicial officers, members of the Bar and members of the Bar Council, Justice Dalip Singh, and other members of the Green Tribunal, Senior members of the State Judiciary, ladies and gentlemen. It is a momentous occasion in the history of State Judiciary and I am extremely delighted to be amongst you on this occasion.

The Judicial Academy that all of us just went around is like a dream project for any judiciary, any State Judiciary in the country. It's a State of the Art kind of Judicial Academy. The facilities for the Judges who will undergo training here in the most modern classrooms, the hostel, the entertainment facilities and the entire environment is commendable. I have been to several states and have also seen similar academies but I think that this establishment which has been inaugurated today, is the finest or at least one of the finest. All the people who conceptualized it, who contributed for its development, who executed the project, including former Chief Justices, Justice Gyan Sudha Misra, who laid the foundation stone of this academy and Justice Virender Singh, who saw it being completed, the Judges of the High Court of Jharkhand who have devoted time to ensure that it is completed in good time, the engineers, the architects, the contractors, the bureaucrats who lent a helping hand for completion of this project, all deserve to be congratulated and I do congratulate each one of them. But I think while we congratulate them, who executed this project we cannot ignore the contribution of the government in conceptualizing and in sparing funds in such large measures for a project like this. We all know that this country is rich in resources, rich in human talent, but it has its own

problems, to which Chief Minister mentioned a little while ago that there are millions in this country who are still below the poverty line, there are millions who do not have proper shelter, millions who do not have clean drinking water, proper facilities for medical treatment, schools and there are millions who have several such problems of sustenance. In a country like this where we have not been able to provide the basic necessities of life for our countrymen, even after 70 years of independence, to spare funds for an institution that does not directly lead to employment generation, or does not directly add to any economic activity is a creditable thing.

But there is a more subtle and a more laudable object behind this kind of allocation and the kind of investment. We all know that judges don't build bridges, Judges do not produce goods, Judges and lawyers do not contribute to any economic activities in the sense that there is no commercial or production activities going on in the court and yet the role of judiciary and judges is seminal. It is important because for all those things, you require peace in the society, for all those activities whether it is industry, whether it is agriculture, whether it is commerce or whether it is any form of development we need rule of law in the country and Judges and lawyers contribute in upholding the rule of law, which makes it possible for everyone else to do what takes the country forward.

And how does it help? It helps in ensuring continuity, in ensuring progress not only at the conceptual level, but in reality. If you have disturbed conditions, if you have conditions that are not conducive to development you will not be able to develop and progress further and how do you create the sense of security? You create a sense of security by building institutions. I must admire and I must complement the Government of Jharkhand for being so imaginative in building the institutions. It has spent something like 58 or 60 crores in building the Jharkhand Judicial Academy. Men may come and men may go, but institutions go on forever, so if you want progress, if you want stability, if you want peace you need to build institutions and if you are investing in institutions that is the best investment that one can think of. So also if you are investing in the new High Court building which is coming up and an institution is being built you are making an investment that will be long lasting. It will lay foundation for progress and that is where the government and the political vision of those who are in power needs to be complimented, for otherwise, I feel if we were to compare the requirement of the judiciary in the one hand and the

requirement of the poor people on the other, for drinking water, for education for roads, for hygiene, for medical support and all then one could well say that these competing claims on the state exchequer perhaps may get preference in certain situations but here the government has realized the importance of having a stable judicial system not only because of the domestic concerns but also because of the expectation of those who are coming to India to make investments. You have seen Hon'ble the Prime Minister going abroad visiting many countries, inviting people to make investment in India and people are being inspired to come and invest in India but do you know when an investor looks for a destination where he has to go and invest, one of his prime concern is whether the investment is safe, whether the country where I am going to invest has a judicial system which can take care of my concerns, whether in the event of a dispute the system of that country will be able to deliver justice to him? You cannot invite people to Make in India, you cannot invite Foreign Direct Investment to come to India unless you also ensure that the judicial system in this country is able to deliver and that is where the invitation for people from outside the country to come to India and make investment in India and to "Make in India" here in this country will remain a half baked offer, unless we also build within the country the judicial system that will ensure that those who come with investment, feel secure that their investment will be taken care of by the system.

You have seen that when it comes to adjudication, people have preferred Singapore. People go to Singapore for adjudication. Why? Because Singapore provides quick and effective adjudication or effective process of resolution of conflicts and disputes. Can it be said to be a situation which is acceptable to us where people come to invest in India, but for resolution of their disputes and adjudication of their problems they go to Singapore. We will not allow the judicial system in this country to be rejected in this manner, but then we need to grow to a level where we can compete with the Singapore and it does not really need much to compete with Singapore. We have infrastructure and this kind of infrastructure even Singapore may not have. The kind of infrastructure that we are creating in this country to make judicial education quick and effective may not be available in many other countries. But, we are in the process of building our infrastructure in a manner, raising the level of adjudication to a level, where we compete with the best in the world. I think, when we talk of judicial infrastructure, we also need to realize that a major part of it deals with

the efficiency of the system. How do you make an efficient system? I can assure you this concept of judicial training for officers being trained in judicial academies was not there for a long time. This is a very recent concept. I remember in 1970 Justice Murtaza Fazal Ali who was from Patna, he was our Chief Justice in Jammu and Kashmir, it was perhaps for the first time in history of the Indian judiciary that he came up with the proposal that we will train judges and there was cynical comment made by many in the system that how do you train Judges. Judges are elevated from the bar at the High Court level and they are very eminent people, they are very experienced lawyers and they do not need to be trained. Judges become District Judges from the subordinate judiciary after 10 – 15 years of experience get trained that way. Where is the need for any training? But as we go along, we realized not only in judiciary of Jammu and Kashmir but the entire country slowly realized that training is very very essential. Experience and Studies have shown that institutions which do not revitalize themselves by training programmes degenerate. You need to revitalize the system and the one way of the revitalizing and galvanizing the system is by training. Not only that, the demands on the system have grown many times, the number of cases that were pending, let us say 50 years ago, before the courts was much less and the number of laws that were affecting our lives were much fewer. The number of laws have grown phenomenally. Look at the Bare Acts and when you just look at the AIR Manuals which gives you all the enactments, you will find there are hundreds and hundreds of laws that have been enacted for the past 50 years. The Prime Minister has declared that he will repeal one law every day which means that by the end of five years we would have around 1700 repealed laws. Such is the number of laws that have come on the statute book, some of them are obsolete, some of them are relevant and some of them need to be repealed. There is no difficulty. But kindly see the number of laws that today prevails in this country and with the law comes litigation and therefore the need for training judges, because a judge need not have been an expert in every branch of law.

I can assure that there are branches of law where one life time is not enough to be an expert. Take for instance Income Tax Law. Income Tax Act is just one Act of Parliament and there is hardly any person in this country who can claim that he is an expert and he knows the Income Tax Law. It is a process of evolution every year and there are hundred and hundreds of amendments. So the bottom line is that not only because of the proliferation

of laws, not only because of consequential burden that the courts are coming under because of avalanche of cases come on to the courts, but also because of the expectation of the people. Gone are those days when people use to live patiently with a case, going for 10 years 20 years, may be form one generation to another. Times have changed, like I don't know how many of you younger people knows rather could not perhaps believe but older people sitting here will believe that not many years ago, if you wanted to make a call, say to Calcutta from Ranchi you had to book a call with 180. Then after half an hour you would remind 181 what happened to my call and the operator will say, yes you are in the queue. Then you will say alright make it urgent and then your call will be updated to urgent. Then again, after half an hour when the call is not given you will say, please make it a lightening call, so it will go up one step further, it may take 3 hours to get a call through to Calcutta or to Delhi and when you start talking, your neighbor would know what you were talking about because you have to shout so loudly as if the voice would not go through the wire, the voice would go outside. So those were the times. But today even a chaiwala, even a vegetable seller, even a plumber who comes to your house has a mobile phone. Perceptions have changed and lifestyle has changed. People want result and result quickly. So people, particularly the younger generation won't be tolerant enough to wait for 10 years 20 years for a case to mature. They want results and therefore, not only because of the laws that are proliferating, not only because of the number of cases that are coming up and the judges burden is increasing but also because of the increasing expectations of the people, the Judges have to perform better. So learning on the job is not enough, you need to train Judges and if Judges are trained, they perform better.

I must say that judiciary used to say earlier the allocation is poor for Judiciary, there is no infrastructure, the court rooms are not good and there is no academy for training of all. But with this kind of facility having been created by the government for the judiciary, I think hereafter judiciary cannot find an excuse of absence of infrastructure. The burden now shifts to judiciary to ensure that they perform to their optimum capacity and deliver justice to the people as quickly as possible. Their efficiency must go up and people must realize that the investment the exchequer / government has made in the court infrastructure and in institutions like this are paying dividends and are meaningful.

I once again compliment the Chief Justice and the Chief Minister both of them, for this very great contribution that they have made and their anxiety and their commitment to cause of justice for the people of Jharkhand. This will be one of those institutions that will serve the State of Jharkhand for very very long time may be forever and I wish it remains in the service of the people of Jharkhand for all times to come.

The second dimension of today's programme as my predecessor speakers have mentioned is about environment. There could not have been a more important subject, more contemporary subject that could be discussed in a conference like this, than Environment. Environment debates are not only in India but all over the world. It's a concern, which practically everyone shares. But as the Chief Minister has rightly said there is again a competing demand between conservation of environment on the one hand and progress on the other. In order to balance the two we have evolved, we have coined this expression Sustainable Development, which in similar words truly means that you have inherited this earth from your ancestors and you are duty bound to conserve it and preserve the environment, so that you pass it on to the future generation. It is in trust with you and you have no right to destroy just as your ancestors had no right to destroy it because you had a right in it. But the problem that confronts us today is two dimensional. One dimension is domestic and the other is global. It is the domestic dimension that concerns us, people of this country (Jharkhand included), whereas the global dimensions concerns not only India as a country but India as a part of larger family of countries that inhabit earth. We have an ethos, we have a cultural heritage that has taught us that nature is mother to every living being because it is nature that sustains every thing that is living.

This is the only country, as Mr. Javadekar spoke, Chief Minister spoke, where rivers, mountains, trees, animals, where planets, sun, moon, mars, Saturn and all the other planets that are recognized by the Indian astrology, they are all worshiped. So it is a part of our ethos that we are environmentally inclined. The problem that arises is because of the need for development. Now while we may continue worshiping as we have been, we must also take care of the aspects that destroy the immediate environment in which we live. For instance solid waste. Solid waste is a major issue, it may not be so in a predominantly rural economy or society of Jharkhand where 76% people live in villages. But it is a major issue in bigger cities. It may become major issue in Ranchi which is a growing city. So these are

issues that need to be dealt with at the domestic front. But what I am trying to emphasize more upon, is, India's perception about the global aspects. What is happening in the global front is that countries who have contributed to the deterioration of environment for, let us say 400 years as for, America's Industrial Revolution came some 300 years – 400 years ago. For 300 years these people have been emitting carbon and you know how much they have been emitting carbon. India's per capita emission is something like 1 Metric Tonne or may be to 1.5 Metric Tonnes. In the studies carried in America it is 10 Metric Tonne. 10 times more is America's per capita carbon emission in the world today and it is not only 10 times rather more today. They have always been emitting more than the average in the world for past 300 years. If today there is a hole in the Ozone layer it is not because India has started some thermal stations or India's factories are emitting something which is going to create a hole in the Ozone layer. It is because of developed countries that established industrially advanced economies that this damage has occurred. Now in Kyoto there was big conference i.e. world conference in which the Americans were told to reduce it by one Metric Tonne from 10 come to 9. They refused and they said they will not do that. America today continues to emit 10 times more than India. It does not mean we should not have clean energy, we should also make an effort as the Chief Minister and Chief Justice said that the court complexes are now depending on solar energy which is clean energy. We may also build hydel projects which are little expensive but which are clean energy, which also have their own dimensions of affecting environment. But do you know that countries energy requirement today to the extent of 60% is met out of thermal project, coal is burnt to give thermal energy and if you stop the thermal units today your villages will go without electricity. Your farmers will be without electricity and that is the kind of dependence that we have on our thermal energy. So this conflict between what ought to be the approach of other countries qua India, in a situation where they continue to be emitting more. An Indian perspective that we are slowly industrializing we have our compulsions. I think this is a debate which the Government of India, the country cannot ignore, which the country will have to take at very high level and even in international forum. Mr. Javadekar referred to the conference which is coming up in Paris. I think the country needs to clearly send a message that if you want India to immediately switch over to clean energy then it is not only for our sake that we do so, we do it for the entire human race. We also do it for the developed countries, who continues to be emitting more.

Let the developing countries come forward in our effort and help us in switching over to clean energy. It is an investment which the developing countries should make in order to ensure that we do not go beyond 1.5 Metric Tonnes per capita. I am sure these are issues which the conference will address. Environment has many dimensions but these are some issues that also need to be addressed at the more mundane level. I think awareness about the significance of environment and the effects of not taking care of it is something very important for which Justice Swatanter Kumar has done commendable job.

I can share with you that in Supreme Court we have matter relating to cleaning of Ganga. I thought that the Supreme Court hardly finds time to look into that but such is my confidence and my trust in his ability that we transferred the question and a part of the controversy regarding the discharge of industrial effluent into the Ganga to the Green Tribunal and Justice Swatanter Kumar have been taking personal interest. He has been holding hearings, issuing orders, directions in the hope that Ganga does become clean during our life time. I am grateful to him that he troubled all of you to stand up on your feet to give a standing ovation to me, but I can tell you that the kind of work that Justice Swatanter Kumar has been doing in the NGT is commendable and we all appreciate it. I don't want to sound as though I am in a process of a mutual admiration between me and Swatanter Kumar. There is a Persian proverb that you call me hazi, I will call you hazi. His presence here today, shows his commitment and while I will not trouble you and ask you to stand on feet to give him a clap. I certainly request you to give him a big hand so that the proverb is proved.

I must thank the Chief Minister for the excellent hospitality he extends to us every time we come here and this time not one but 4 – 5 of us have come. I know it means a lot expense for the state but it gives us also an opportunity to meet people, it gives an opportunity for other people to interact at some level with us and we carry home impressions about what is happening. We step out of the ivory tower in which generally the Judges live and come in contact with realities when we drive through the streets of Ranchi when you see what is happening on the roads and how life goes on. It is good once in a while for the Judges of the Supreme Court to come outside Delhi and to see and meet people and to hear people and their grievances and their perceptions. I think it's a great opportunity for all of us to spend some time with experts who have come. NGT expert, who will address

the issues regarding the environment and some of my brother judges who are also keen environmentalist who will also be sharing their views on this very important conference that marks the beginning of this academy's academic life committed not only to judicial training, but partly to upholding the rule of law and environment, both.

Thank you very much and God bless you!!





Speech by

HON'BLE MR. JUSTICE ANIL R. DAVE

Judge, Supreme Court of India

In Judgment we normally say when we agree with the Judge who delivered the Judgment that I agree. Here I agree with what Justice Swatanter Kumar has said but I would like to add something more.

I am really extremely happy today that I got an opportunity to remain present at the time of inauguration of this Academy. In my opinion it is a very pious event. This premises and this building which is made of cement, concrete etc was an ordinary building but now after its inauguration has become a temple of *Maa Saraswati*. It is not an ordinary building now. It is Mandir, the temple. When Mr. Madhusudan Ganguly recited a *sloka* on *Maa Saraswati*, I was reminded that now we are in a temple of Maa Saraswati where we all Judges would be learning and I am very sure that this academy will help all young Judges, as well as old Judges too. Old Judges are also learning a lot. Our profession is such that we have to go on learning. The day we stop learning we are dead. The society is dynamic, our subject is also dynamic and therefore, we have to keep on studying. If we don't study then we become stale. With our old knowledge we cannot continue for a long time, especially when the world is changing at a very fast pace and is too dynamic. So law which I learnt today might become obsolete tomorrow and if I do not continue to learn, I think I may put myself in difficulty. For example when I was a student studying in commerce college and suppose somebody put a question to me that after how much income you have to pay income tax, I would say 4000 Rupees or 5000 Rupees. Had I not studied Income Tax Act perhaps everywhere I would have said the same thing. At some point of time income tax used to depend on the number of children a person had, but now there is no concept of income tax being a function of number of children. In these ways

the laws are changing now. You are not with the society if you are not updated with the new law and if you are not updated with the new law, you may put yourself in difficulty and especially when you are a Judge and when you are rendering your services to the society. It is very good thing that you should keep yourself updated. I am very happy that it is a wonderful building, wonderful premises, wonderful temple where all Judges would learn a lot and I am very happy that Gyan Sudha Jee, former Chief Justice of the state was here when foundation stone was laid and Chief Justice Virender Singh Jee is present here at the time of inauguration and Chief Minister Jee जिन्होंने दिल और तिजोरी खोलकर पैसे दिए। Team of the Chief Minister and Chief Justice deserves to be complemented the most. I do complement them, so I am really happy to be here today.

At the same time, थोड़ा दुःख भी होता है, I am also unhappy to be here. Unhappy today due to reason हमारे कंट्री हिन्दुस्तान में मुझे क्लाइमेट चेन्ज की बात करनी पड़ती है, इकोलॉजी की बात करनी पड़ती है। इकोलॉजिकल बैलेन्स नहीं रहा ये बात करनी पड़ती है। Very bad thing on my part. Being a Hindustani, being a person from my country आपको पता होगा when we get up from the bed in the morning we used to recite a sloka coming from Vedas.

“विष्णोपत्नी नमस्तुभ्यम्, भाग्य स्थः स्पर्शः क्षमशवे”

इसका अर्थ है हे पृथ्वी माता, मुझे क्षमा करना, मैं मेरा पैर आपपे रख रहा हूँ।

This is the way in which we used to adore our mother earth. This is the way in which we used to respect our mother earth. This was the way in which we used to respect our mother earth. और आज हमें कॉन्फ्रेन्स करनी पड़ती है कि मदर अर्थ को कैसे गंदा न करे। Is it not shameful on our part? I really feel very bad, we must have to do something and I am happy that something is being done here. Instead of giving bouquet, saplings were given and the indication was पेड़ ज्यादा लगाओ, पौधा ज्यादा लगाओ। I don't know who told me Justice D. N. Patel or Justice Bhatt, नई बिल्डिंग बन रही है वहाँ अभी तक एक खड्डा भी नहीं खोदा गया है, और उन्होंने करीब 1250 पेड़ लगा दिए वहाँ। Once again I would like to thank Hon'ble Chief Minister that he has given a huge chunk of land and said he would be giving money. जैसा

कि मैंने बताया कि when I was told that 1250 trees have been planted, I was delighted, then when the building would be constructed after three years there would be so many trees. मुझे अच्छा लगता है ये, बातें कम करना और काम ज्यादा करना। I am really congratulating the entire team of the Chief Justice for doing this wonderful job, I am planting trees right from now, so that after three years the building would be a wonderful building, which is surrounded by greenery. Environmental problem जो होते हैं वो कम होंगे। When my brother Justice Swatanter Kumar said with regard to “ऊँ पर्वत” I was little touched. I have been to “ऊँ पर्वत” twice in my life. Once in 1993 thereafter 2008 or 2007, दो दफे गया हूँ मैं वहाँ। It s a wonderful place very beautiful. I went about 200 km to enjoy the beauty of “ऊँ पर्वत” live, picture में नहीं, फोटोग्राफ में नहीं, टी.वी. में नहीं. When my brother was talking about “ऊँ पर्वत” I was reminded of some other places which I had visited, when he was talking about glacier, I was thinking about the glacier, which I had visited. Ganges, it comes from Gangotri glacier. Near Gangotri glacier, there is a place called *Tapovan* which is about 15000 feet high. I stayed there overnight, even at Om Parvat I stayed for two nights. Ganga which comes from Gangtore glacier has receded to the extent of 76 metres in three years, normal principle is that glacier would recede 10 to 30 metres in 3 years due to global warming. But Gangotri glacier had receded by 76 metres more than the normal. If glacier melts by 10-30 metres, it is considered to be normal due to global warming and due to global warming the temperature is going up, further it has gone up by 6 degree Celsius in last 100 years. So far Himalayas is concerned it is shocking that it has gone up by 1.5 degree Celsius and because of that all the glaciers are melting. Almost 75% of the fresh water on the earth comes from the glacier and if the glacier melts it will create problem in summer, because in summer there will be no source of water from perennial rivers like Ganges. In monsoon we can understand that rain brings water, but what happens in summer. In summer because the glacier melts to certain extent, we get water in our rivers. Now what would happen when these glaciers melt to certain extent, that we will not be having glacier at all and it is a very serious thing though somebody might think it is just 76 metre. These glacier

are 1000 years old. Similarly, I visited Pithoragarh in Uttarakhand. I visited Milan glacier where there is a record maintained by Britishers that in last 108 years these Milan glacier has receded 1350 metre or so almost 1.4 km in last 108 years. Suppose you look at the last five years, it has receded more due to global warming. Global warming is increasing so far because of the development we are having right now, because of the industrialization and because of the other facilities we have. We have to do something seriously otherwise we will be in difficulty. Every centigrade increase in temperature would bring down the food production. You may feel that it is ok, A.C. चालु कर दो और रहेंगे अंदर, you can think like that गर्मी ज्यादा है, ठीक है ए.सी. चालु कर दो ना। अरे ए.सी. चालु करोगे, बाहर का टेम्परेचर कितना बढ़ेगा पता है। Do you know that meeting here in A.C. room may raise the temperature outside. When we start the A.C. the temperature outside immediately goes up. This is happening everywhere. Now if the temperature increases you may think ठीक है थोड़ा बिल ज्यादा आयेगा पैसा ज्यादा कमा लेंगे। No it is not so. What about the food production, with every unit rise in temperature food production goes down. Wheat or rice or any other crop, every crop grows at a particular temperature, if the temperature goes up, the production naturally declines. Right now as I said that 6 degree Celsius temperature has gone up, but what after 15 years, what about after 25 years when there are more cars, more A.Cs., when more things are moving around, more aircraft, then temperature is naturally going to be up and for that purpose we will have to do something seriously and I am very happy that such an important issue is being discussed in this Academy today and tomorrow. I am very sure that this subject would be discussed properly and some way out shall be found which we can apply, as for example now saplings were given, flowers were not given and more than 1200 plants have been planted which is a very good thing.

This is what we can do for the society. If we will not do that, ultimately we may or may not suffer but next generation would suffer because our life is maximum 30-40 -45 years looking at the range of age, the age of any human being is 60-70 years and thereafter what will happen with this earth and I always say we all are trustee, the earth

does not belong to us. The earth has got sufficient to furnish our need but not our greed, this is what Gandhi Jee has said, the earth would give you to the extent to meet your need, sufficiently but not for your greed. We are becoming so greedy that we are putting the next generation in difficulty. I am very sure that we will not do that and we will study the subject very nicely and we will do something productive. We will do something which is creative and which will guide the society.

Thank you very much, Jai Hind.





HIGH COURT
OF
JHARKHAND

Speech by

HON'BLE MR. JUSTICE SWATANTER KUMAR

Former Judge, Supreme Court of India

Chairperson, National Green Tribunal, New Delhi

Good Morning to all ladies and gentlemen, Hon'ble Justice Mr. T. S. Thakur, Judge, Supreme Court of India, Hon'ble Mr. Raghubar Das, the Chief Minister of Jharkhand, Ranchi, My Lord Justice Anil R. Dave, My lord Justice Kalifulla, My Lord Justice Eqbal, My Lord Justice Shiva Kirti Singh and Hon'ble Mr. Justice Virender Singh, Hon'ble Judges of Jharkhand High Court, Members of Judicial Services, Advocates, Members of Bar Association, Senior Bureaucrats, Police Officers, my colleagues and more importantly the students and ladies and gentlemen. First and foremost I must from the core of my heart, congratulate, Hon'ble the Chief Justice and Hon'ble the C.M., for having created a State of Art Judicial Academy which to my limited view seems to be probably the best Judicial Academy in the country. This is one of the examples as to what can happen when the executive i.e. the Chief Minister and the Chief Justice works with a common mind and a common object. The results are beautiful. They are outstanding and I am sure this would bring a great life in the judicial administration system of the State of Jharkhand. They have not only taken care of providing due mechanism for dispensation of education to the trainee Judges or to the members of the higher judiciary but even of their comfort. I compliment Chief Minister and the Chief Justice that you have done such a wonderful job. Having said that, the second thing I would say as it is commonly said that once a Lawyer always a Lawyer. You may be a judge for 30 years still you will be a Lawyer at your heart and that you saw just now in the address by the Chief Justice of the Jharkhand High Court, how he trapped three people straightaway. Justice Thakur, he got the commitment, I am sure Chief Minister will find it very difficult to avoid his request and so far I am concerned he is like a younger brother to me therefore I concede that when ever and however you will require the circuit bench of the National Green Tribunal, it will be in Jharkhand. You give us the infrastructure and provide us little help and Jharkhand is environmentally very sensitive State. Thereafter, it will be our effort to come here and ensure dispensation of environmental justice. So, you can rest assured My Lord the Chief Justice that you do not have to do anything except telling us, when

should we come. It is said, ladies and gentlemen, justice is the first promise of our constitution. Judges infuse blood into the administration of justice system of our country. It is the wisdom of the Indian Judiciary, which expanded the dimensions of the fundamental right under Article 21 of the Constitution and included within the ambit of right to life, the right to a decent and clean environment. Indian Judiciary deserves a compliment for expanding the dimensions of constitutional jurisprudence for the benefit of citizenry of the country without exercising any judicial over reach and within the limit of judicial activism. Hon'ble Supreme Court has produced number of stalwart judges who are author of the history of Constitutional Law in our country. I am very happy to share that, abroad wherever I went the respect for Indian Supreme Court and institution of judiciary in India is tremendously high. Today we have among ourselves the senior most Judge-I of the Supreme Court of India, Justice Thakur and all his colleagues and in their presence I acknowledge the contribution judiciary has made to the growth of country, to the rights of people, to the education of the people, to any concept of human rights. To my opinion and in my humble submission, the Indian Judiciary does deserve a great compliment for the works done by them in the field of environment to which Justice Thakur is a great author. May I very humbly request to give him a standing ovation, ladies and gentlemen. One of the reason Why I requested all of you to rise from your chairs is that it is advisable not to sit for a long time but to stand in between and the second and the most important thing is that I want to share with you is a personal experience. I had the privilege to share the bench with my lord Justice Thakur as well as with the most of Supreme Court Judges who are present here. Once in the High Court, we were hearing the Full Bench matter. It was a contempt matter and the bench was presided over by Justice Thakur. So after hearing 5-10 minutes, I told him that justice Thakur, I think we should now put an end to it but he said, as he used to call me affectionately '*Panditji*'. So he told me Panditji 'Suno to Sahi'. So I obviously being the Junior Judge and in any case because of my respect for him, I kept quiet, I heard it, as long as he wanted to hear them. In the end of course, our result was what we had initially discussed in those 7 minutes but I learnt a great lesson from him and what he said, probably he does not remember but I do. He said to make a decision expeditiously, it is not necessary to be impatient and compliments to you Justice Thakur for that thought. Coming to the Indian Parliament and the Hon'ble Chief Minister here, whether the talk of *Swachh Bharat* Programme or we talk of River Ganga, I do not know

how many of you have ever noticed the commonality that has appeared in legislature and Judiciary of the country. If you see on a clean platform, there is not even an iota of difference. The governments are as concerned about environment as courts are and courts are as progressive about the environment as the governments are. Therefore, I think that the Minister for Environment was scheduled to join us but probably could not come for some reasons. I must compliment the way they are taking up the environmental issues and the way they are projecting public perception of concerns for environment and that is what appears to me that when we talk of '*Tamaso Maa Jyotir gamay*' lead me to light from darkness which does not actually mean a physical lighting but the knowledge. Earning of knowledge has no co-relation to the age or your academic qualification, experience teaches you every day. Therefore, today, I compliment the judicial academy that it opens its first chapter with the subject of environment and its concern. If we see the very subject right from global warming to Green House restrictions, Bio-diversity, Bio-Medical Waste, Municipal Solid Waste, Water Air Cleaning. There is no subject we have not touched in this conference. So I am sure, especially the young generation here would once be going out after two days, they would be much richer in their thinking and conceptualization of the environmental issues. Ladies and Gentlemen before I really get into something more serious on the environment matters, I would like to share with all of you two significant factual informations. I hope most of you know about that. This August Gathering which shows the epitome of pristine natural beauty of our county on one hand and belief of the people of India, particularly of our ancestors in the need and care for the environment, on the other. First of these is the Om Parbat which is at the height of 6191 meters and besides its religious significance, it exhibits the beauty of the nature and pristine environment. It even shows the incredible natural carving including the dot of Om and symbol of Om. Om is considered sound of cosmic energy and it contains all sounds in itself. This is what nature has gifted to our country. Secondly 700 years back our ancestors created *Bhugol Chakra* and *Khagol Chakra* consisting each one of them 7 *Chakras*. Even while the former dealt with the earth, under the earth including water bodies and under the water. The later dealt with air, cloud and outer space. They even depicted the measures required to be taken for protection of environment and also defined the Ozone, which is the third layer and spelt out in that *chakra* the means to protect the Ozone Layer. This depiction is not a figment of imagination but you could physically see the same in Meenakshi Temple

even as of today. Can the whole world think more than 700 years back the Indian thoughts of ozone layer, its maintenance and draw its entire scientific conceptualization, implementation and protection in the most famous temple of our country? That is what our tradition of heritage is about environment. May be you think about this, ladies and gentlemen, what we are expected to do. World is learning from us. Wherever the world is holding the conferences, trying to find out the measures and the means as were stated by our ancestors 700 years back.

Now the other thing I would like to share with you is the climate change. In simple words climate change means, change in the climate condition of a region at global level or at the country level, which lasts for a extended period of time. Global warming refers to climate change that causes increase in the average temperature of the lower atmosphere. Green House Gases, such are Carbon Dioxide, Methane, Water Vapour and other gases act as Green House around the earth. This brings the latent heat from sun into the atmosphere. It does not allow the heat to escape back into the space and thus causing increase in earth temperature. Recently, it was demonstrated on scientific analysis of data that the anticipated increase is of two degree Celsius and Carbon Dioxide emissions are likely to increase. Green House gas dilution is expected to be 445 p.p.m. You can imagine that even U.K, when enacted its climate Change Act, 2008, if you read it today its content and spirit is merely advisory and does not stipulate the consequences of a country not reducing its carbon emissions. India is the contributory and it has declared its policy to reduce by 2030, 25 % of the carbon emission. Therefore, it has to be a globally understandable collective effort, if we have to bear the consequences of climate change and bring it to a level where it will be possible for the human beings to live comfortably. The Glaciers in India are reducing at the rate of 10-12meters per year. You can imagine what is going to happen. You are finding the temperature changes, ranges . For two and half month, Jharkhand has not had rain, this is an indicator for something very difficult which the State may face tomorrow. Therefore, here is an occasion for us to ensure that we take all appropriate steps and due care, not individually but on global level, ensuring access to water and sanitation, handling of municipal solid waste. Ladies and gentlemen we hardly even have single city in our country, which is capable of completely collecting, transporting and disposing its municipal solid wastes. Whether we talk of Shimla, whether we talk of

Jharkhand, Whether we talk of Delhi. If we talk of Delhi, it is generating a municipal solid waste of more than 2000 Metric Tonne every day. We can imagine where it is to go. This is what we are looking at. To bring you to certain measures that I hope in the coming two days of conference the Experts would be adverting to about linking of economics, trade with environmental creation of climate funds, sensitize climate change with human rights and International Dispute Resolution Mechanisms binding International Protocols, Roles of International Co-operation and Technical Assistance as the tool for development of environmental jurisprudence, lacunae in legal framework alternative methods of energy. How should we think about the issue of environmental problem today is “thinking globally acting locally”. Local and domestic adjudicative bodies which are independent, impartial, timely accessible with expert members. Developing nation to developed nation making efforts to make minimum International Environmental standards and for the young generation to reduce, reuse and recycle are the three most efficient ways of disposal and control of waste. Converting waste to wealth, capacity building and introduction of latest technology for infrastructure, creating awareness among the people. Education is the most important facet as of today. We must induct environmental education at the school level if we want twenty years later to find that people are environmentally conscious and they do what is right. Ladies & Gentleman in the end I would just say one thing, the Judiciary, the Executive and all this August gathering present here should take a pledge to send a message back home, back in your institutions that our survival depends on our protection of the environment. I do hope that this conference would culminate into a great and sincere advice on protection of environment and care for nature. May be you don't love nature, but please do care for nature if you want to care for yourself.

Thank you ladies & gentleman

Justice T.S. Thakur
Court of India

Chief Justice

Justice G. S. Singhvi

Justice D. Y. Chandrachud

Justice P. S. Rao

Justice R. F. Emerlin

Hon'ble S. Ramakrishna Murthy
Minister of Law, Government of Karnataka

Hon'ble Justice J. S. Narayana
Chief Justice of Karnataka



Speech by

HON'BLE MR. JUSTICE VIRENDER SINGH

Chief Justice, High Court of Jharkhand

Ladies & Gentlemen

Good Afternoon and Welcome to this *Eco-Friendly Campus of Judicial Academy Jharkhand*, established in front of Dhurwa Dam, Ranchi, which has been inaugurated an hour before by Hon'ble Mr. Justice Tirath Singh Thakur, Judge, Supreme Court of India & Member, General Body, Governing Council & Executive Committee of the National Judicial Academy India. We are very grateful to Your Lordship that despite running short of time and among various other commitments, Your Lordship has been kind enough to win time for blessing the entire judiciary of Jharkhand on this momentous occasion of twin big events viz. Inauguration of *New Campus of Judicial Academy Jharkhand* and Opening of *New Chapter : Conference on Environmental Issues & Climate Change in the State of Jharkhand*. The idea to organize a Conference on Environmental Issues, especially in the context of Jharkhand was born in our mind not long ago. I along with my Brother Justice Aparesh Kumar Singh and Justice Chandrashekhar were supposed to attend an International Conference at Vigyan Bhawan, New Delhi on Environmental Issues held in March 2015. Justice Aparesh Kumar Singh and Justice Chandrashekhar were fortunate to attend it though I could not make it because of my pre-occupation at NALSA Meet at Ranchi. The Conference on Global Environmental Issues organized by the National Green Tribunal added the much needed fillip to this idea. My Brother Judges came back enriched with their experience gained during the Conference and impressed upon me to organize a Conference on Environmental Issues in the context of Jharkhand State taking on Board all the Stakeholders and Experts in the field. We started working on this. It struck upon us that there could be no better launching of New Campus of Judicial Academy than opening it with a Conference on the Environmental Issues and Climate Change. It is not only a subject of deep research and study, but, at the same time, concerns the State and the entire region and affects the daily life of each one of us. We worked with our team towards this goal and we are hopeful that Almighty would also grace us in proving the Conference to be a milestone in the State of Jharkhand. The very presence of My Lord Justice Thakur

would act as a huge boost to the cause for which this Conference has been organized. We Welcome you Sir along with *Madam Amita Thakur* and beseech Your Lordship's continued blessings and guidance for the entire judiciary of the State.

We welcome Hon'ble Mr. Justice Anil R. Dave, Judge, Supreme Court of India and Member, General Body & Executive Committee of the National Judicial Academy India along with Madam Meena Dave. Your Lordship has given us immense strength by agreeing to be present here for showering Your Lordship's kind blessings to the Judiciary of Jharkhand on these occasions. We have been given assurance that My Lord will be visiting this place once again as Executive Chairperson, National Legal Services Authority alongwith My Lord Justice Thakur as Chief Justice of India and Patron-in-Chief, National Legal Services Authority.

We welcome Shri Raghubar Das Ji, Hon'ble Chief Minister of the State of Jharkhand, who has always kept himself open to the betterment of the judiciary in the State whether it concerns the development of infrastructure or organising conferences for knowledge sharing, skill development and bringing awareness among the stakeholders. It is on account of his support, Judiciary of Jharkhand could host the most prestigious national event in organising 13th All India Meet of State Legal Services Authorities in the month of March, 2015; construction work of the New High Court Complex running into 165 acres, virtually a Judicial City in itself, commenced in the month of June 2015; and recently a Solar Energy Generation Plant in Khunti Civil Court became functional on 2nd October, 2015 which falls under e-Court Project Phase-II started by the Supreme Court of India and then Ramgarh Civil Court which became functional on 3rd October, 2015 and now today we are able to have a Campus of Judicial Academy Jharkhand, which is really a very big achievement for the State. Let me be a little selfish here. Since Hon'ble Chief Minister is a man of word and he sticks to his commitments as we all know after commitment made by him in the month of March 2015 before My Lord Justice Thakur and My Lord Justice Dave Solar Energy Generation Plant has been made functional at Khunti Civil Court within six months only, I would request him today also he should make a commitment here from this podium that our New High Court Complex, which is under construction and is likely to start in three years' time, it should run on Solar Energy from day one. I know it will cost few crores to the State, but, in such a big project which runs into about 400 crores, perhaps few crores would be pea nuts for Solar Energy Project. I am sure Hon'ble Chief Minister would consider it.

We welcome Hon'ble Mr. Justice Swatanter Kumar, Former Judge, Supreme Court of India & Chairman, National Green Tribunal along with Madam Parnam Agnihotri. Without Your Lordship's guidance and support we could not have ventured towards organising a Conference of this magnitude on Environmental Issues & Climate Change, which is completely a New Chapter in the State of Jharkhand. The topics of all three Working Sessions have been chosen with the consultation of Chairperson, National Green Tribunal, undoubtedly, mainly concerning the State of Jharkhand, because in certain prime area of concern, State of Jharkhand is in the crawling stage due to lack of proper planning and awareness. I am not entering into all these details at this stage leaving it open for the speakers to discuss it threadbare. We are really thankful to My Lord for associating National Green Tribunal as a Co-Sponsor to this Conference. This is the right time, when another request can be made to Hon'ble Chairperson and I am sure that His Lordship would accede to it. We have many cases pending in this Court relating to environmental issues. Very recently, in a matter pending before the Principal Bench in case Satya Prakash versus Ministry of Environment & Forest & Others, Hon'ble Chairperson on 28th August, 2015 has given liberty to the applicant therein to file affidavit giving complete details on unauthorized mining and stone crushing activity which is being carried illegally in the area in question. We have also taken this issue in one of Public Interest Litigations. What I want to suggest, if acceptable to Hon'ble Chairperson, that Ranchi should also have a Circuit Bench of Eastern Zone Bench of National Green Tribunal at Kolkata and I am sure that Hon'ble Chairperson will certainly consider our request.

We welcome Hon'ble Mr. Justice F.M.I. Kalifulla, Judge, Supreme Court of India for accepting our invitation for being a part of these glorious occasions for the Judiciary of the State along with Madam Amira. We are very grateful that Your Lordship afforded us an opportunity to have an Interactive Session for 108 Civil Judge (Junior Division) Trainees to be chaired by Your Lordship. There could not have been any other befitting occasion than today when we all have stepped in a New Campus of Judicial Academy Jharkhand to have such an interactive session titled "An Endeavour : Mandatory Application of Mediation by Civil Courts in Pending Litigations". We are thankful to you Sir.

We welcome Hon'ble Mr. Justice M.Y. Eqbal, Judge, Supreme Court of India and Madam Iffat Eqbal. Your Lordship hails from the Judicial Fraternity of this State and has always been carrying special affection and attachment for it. Your Lordship's contributions in overall development of Judicial Fraternity of the State have been extraordinary. I may

mention that the need for having an exclusive building for Judicial Academy was felt and first step in this direction was taken by My Lord, as Judge-In-Charge Education of Judicial Academy Jharkhand, on 04.12.2008, whereafter altogether 6.70 acres land was allotted for this Campus of Judicial Academy Jharkhand. This site was selected by His Lordship only. We beseech Your Lordship's continued guidance and support.

We welcome Hon'ble Mr. Justice Arjan Kumar Sikri, Judge, Supreme Court of India along with Madam Madhu Sikri. We feel privileged to have Your Lordship's presence and blessings with Madam in these momentous occasions. We are thankful that Your Lordship is also chairing one of very important technical sessions on *Urban and Bio Medical Wates*.

We welcome Hon'ble Mr. Justice Shiva Kirti Singh, Judge Supreme Court of India along with Madam Shefali. Having been associated with the Judicial Fraternity of the State from before bifurcation of the erstwhile State of Bihar and creation of the new State of Jharkhand, Your Lordship has a close attachment with the Judiciary of the State of Jharkhand. When Your Lordship was elevated as Judge of the Patna High Court, the High Court of Jharkhand was functioning as Ranchi Bench of Patna High Court.

We welcome Hon'ble Mrs. Justice Gyan Sudha Misra, Former Judge, Supreme Court of India. During Your Lordship's tenure as Chief Justice of the High Court of Jharkhand, the foundation stone of this Campus of Judicial Academy was laid on 17th May, 2009. The Judiciary of the State shall always remain indebted to the contributions and efforts of Your Lordship.

I welcome all my Brother Judges of the High Court of Jharkhand and their Better Halves; Hon'ble Mr. Justice Dalip Singh, Judicial Member, National Green Tribunal; respected Former Judges of the High Court of Jharkhand and Patna who are present here; our Resource Persons and Speakers for this Conference : Shri Binod Poddar, learned Advocate General of Jharkhand; Shri Rajiv Gauba, Chief Secretary of the State of Jharkhand; Shri Rajiv Ranjan, Sr. Advocate & Chairman, Jharkhand State Bar Council; Shri B.S. Sajwan, Expert Member, National Green Tribunal; Dr. D.K. Agrawal, Expert Member, National Green Tribunal; Dr. Arun Mohan, Senior Advocate, Supreme Court of India; Dr. Vinod Tare, Professor, Environmental Engineering & Management Programme, IIT Kanpur; Dr. Rajesh Biniwale, Principal Scientist & Head, Cleaner Technology Centre, National Environmental Engineering Research Institute, Nagpur; Shri P.R. Sinha, Country Director, IUCN; Shri Ravindra Kumar Sinha, University Professor & Head of Zoology Department,

Patna University; Shri M.P. Singh, Director, Forest Education, Ministry of Environment, Forest and Climate Change, Dehradun; Dr. M.R. Sreenivasa Murthy, Dr. K. Syamala and members of Team of Rapporteurs from NUSRL Ranchi ; Shri B.B. Mangal Murty, Secretary, Law (Judicial) Department, Government of Jharkhand; Officers of Indian Administrative Service and Officers from various Departments of the State, present here; Shri D.K. Pandey, Director General of Police, State of Jharkhand and other Police Officers; Judicial Officers of the State Members of the Bar; Law Students from NUSRL; Media Persons.

Before parting with, in the context of the theme of today's Conference, I wish to adopt the words of Father of our nation, Mahatma Gandhi and I quote: -

“The earth, the air, the land and the water are not an inheritance from our fore fathers but on loan from our children. So we have to handover to them, at least, as it was handed over to us.”

The presence of all the dignitaries on the dais and off the dais would act as a huge boost to the movement for protection of environment in this region and is going to send a strong message.

Once again I welcome one and all and wish a Very Nice Day ahead.

Jai Hind.





Speech by

HON'BLE MR. JUSTICE APARESH KUMAR SINGH

Judge, High Court of Jharkhand

Good afternoon to all of you,

Dr. A.P.J. Abdul Kalam, a scientist of eminence, a visionary and former President of India breathed his last on 27th July 2015 while delivering his last lecture to the students of Indian Institute of Management, Shillong on the topic '*Creating a livable planet -Earth*'. Of all the roles that he performed with great excellence, he would like himself to be known as a 'Teacher' above all. The auditorium in which we assemble here is dedicated to his memory.

The conference on environmental issues and climate change being organized in this Auditorium named after him on the first day of inauguration of Judicial Academy, is a tribute to his memory and commitment to keep alive our mother Earth as a livable planet for our future generations to come. We should take a pledge today to work together towards this goal. The father of our nation Mahatma Gandhi famously exhorted "*Earth has enough resources to meet people's needs, but will never have enough to satisfy people's greed*". The world at large seems to have realized this truth and our presence here today is only a testimony to that. The Holy Dalai Lama when asked what surprises him most about the humanity, answered "Man". Because he sacrifices his health in order to make money; then he sacrifices money to recuperate his health and then he is so anxious about the future that he does not enjoy the present; the result being that he does not live in the present or the future; he lives as if he is never going to die, and then dies having never really lived". This is the predicament of the human generations. The struggle for existence and survival for the fittest has ensured that we have reached a stage where we are today.

This is a constant endeavour to maintain a balance between the human need to meet

lifestyle and feeling of well being on one hand and preserving the natural resources and ecosystem on the other on which we and our future generations depend. Sustainable development does not focus solely on environmental issues. More broadly, it encompasses the three general policy areas namely, economy, environment and society. Various definitions of sustainable development have been enunciated from time to time. Different models for sustainable development have also been propounded over a period of time. Different indices of sustainable development have also been developed by the experts and scientists. Such multi-dimensional development indicators show a link amongst the community – economy, environment and society i.e.

- (I) **Gross National Happiness (GNH)** is coined by Bhutan's King Jigme Singye Wangchuck in 1972. The four pillars of Gross National Happiness are promoting equitable and sustainable socio-economic development, preservation and promotion of cultural values, conservation of natural environment and establishment of good governance.
- (II) **Human Development Index (HDI)**: The Human Development Index was developed in 1990 by Nobel Laureate Dr. Amartya Sen,, Pakistani Economist Dr. Mahbub Ul Haq, Gustav Ranis of Yale University and Lord Meghnad Desai of London School of Economics. The HDI measures the average achievements in three basic dimensions of human development,
 - Life Expectancy at birth
 - Knowledge as measured by the adult literacy rates
 - A decent standard of living as measured by the log of gross domestic product (GDP)
- (III) **Ecological Footprint (EF)**: Another category of indicators of sustainable development formulated by Professor William Rees, University of British Columbia, Vancouver, Canada is the Ecological Footprint (EF) which compares human consumption of

natural resources with Earth's ecological capacity to regenerate them.

(IV) ***Happy Planet Index (HPI)*** introduced by New Economics Foundation in July 2006 is an innovative measure that shows the ecological efficiency with which human well being is delivered.

The International Community took a serious resolve on the concern for sustainable development for the first time in Stockholm Conference, also known as United Nations Conference on Human Environment held in June 1972, on common outlook and principles to inspire and guide the people of the world for preservation and enhancement of human environment. It also approved the establishment of United Nations Environment Programme (UNEP) to provide continued leadership and coordination of environmental action.

The World Commission on Environment and Development (WCED) was convened by the United Nations in 1983 and known as Brundtland Commission after the Chairperson Mr. Gro Harlem Brundtland. The Commission gave recognition to environmental problems as being global in nature and necessity to establish policy for sustainable development in the common interest.

The Earth Summit held at Rio de Janeiro, Brazil in June 1992, known as United Nations Conference on Environment and Development (UNCED), participated by 178 Governments including 118 Heads of States or Governments, created the Commission on Sustainable Development to follow up UNCED to monitor and report on implementation of the agreement at local, national, regional and international levels. Five agreements were signed during the Conference.

- ***The Framework Convention on Climate Change (UNFCCC)*** introduced measures designed to reduce the threat of global warming;
- ***The Convention on Biological Diversity (CBD)*** put forward the proposals aimed at preserving the Earth's biological diversity through the protection of species and

ecosystem.

- **Agenda-21** – An action plan aimed at introducing sustainable development to guide Government policies throughout the world over the forthcoming decades.
- **The Rio declaration** includes 27 principles which were believed to guide action on development and environment.
- Finally, **forest principles** emphasizing the rights of States to exploit their own forest resources while advocating general principles of sustainable forest management.

In the Millennium Summit in 2000, 189 world leaders adopted the United Nations Millennium Declaration i.e. Millennium Development Goals (MDGs). These included:

- Eradication of Extreme Poverty and Hunger
- Achieving universal primary education
- Promoting gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria and other diseases
- Ensure environmental sustainability as also develop a global partnership for development.

In our South Asia also, the 13th SAARC Summit held in January 2006 in Bangladesh, SAARC Development Goals (SDGs) for the period of five years from 2007 to 2012 were adopted which included goals such as livelihood, health, education and environment and fight against the poverty.

The world summit on Sustainable Development held in Johannesburg in 2002 marked

ten years since United Nations Conference on Environmental Development held at Rio de Janeiro. It sought to promote partnership as a non negotiated approach to sustainability.

The Kyoto Protocol entered in 2005 binded the developed countries 'parties' to goals for greenhouse gas emission reduction and establishing the Clean Development Mechanism for developing countries.

India has finally submitted its Intended Nationally Determined Contribution (INDC) on 02nd October 2015 in its commitment to initiate domestic preparation for achievement of objective on environmental protection and sustainable development, as invited under the Conference of Parties (COP) of United Nations Framework Convention on Climate Change (UNFCCC) at 19th Sessions held in WARSAW in November 2013. The commitment on the part of India will be put before the 25th Sessions of the Conference of Parties to be held in Paris in December 2015. The document of INDC seeks to reflect India's attempt to work towards low carbon pathway while simultaneously endeavouring to meet all environmental challenge that country faces today. It envisions a sustainable lifestyle and climate justice to protect the poor and vulnerable from adverse impacts of climate change. India's INDC contains the following proposals.

- i. Sustainable lifestyle
- ii. Cleaner Economic development
- iii. Reduce Emission and intensity of Gross Domestic Product (GDP)
- iv. Increase the share of Non-Fossil based Fuel electricity
- v. Enhancing Carbon Sink (Forest)
- vi. Adaptation
- vii. Mobilizing finance
- viii. Technology transfer and capacity building

It declares a voluntary goal of reducing emission intensity of its GDP by 20-25 percent of 2005 levels by 2020 despite having no binding mitigation obligation as per the convention. INDC lays thrust on renewable energy, promotion of clean energy, enhancing energy efficiency, developing climate resilient urban centres, abatement of pollution and India's effort to enhance Carbon Sink through creation of forest, sustainable green transportation as some of the measures for achieving this goal. It captures citizens and private sector contribution to combating climate change. It promises improvement in energy efficiency of thermal power plants. It professes the urban transport policy, a mass Rapid Transit System. In the field of renewal energy, it has set up targets of 175 giga tonns by 2022 which is supposed to result in abatement of 326.22 million tonns Co₂ Eq / year. The range of ecosystem, goods and forest services provided by forest includes carbon sequestration storage. According to the paper, forest and tree cover presently amounts to 24 per cent of the geographical area of the country. It plans to focus on sustainable forest management, afforestation and regulating diversion of forest beyond any non forest purposes to increase its carbon stock. It proposes long term initiatives and programmes like Green India Mission, Green Highways Policy and Financial Incentive for forestation and plantation along river, REDD + i.e. reduce emission from de-forestation and forest degradation and compensatory Afforestation Forest Fund Management and Planning Authority. The document also emphasizes India's imperative need for adaptation in the development process to face the climate change in key sectors like agriculture and water. The Intended Nationally Determined Contribution submitted by India seeks to achieve the development agenda while combating the climate change and fulfilling its responsibility towards global community.

Developing countries like India have always faced resistance in transfer of technology by the developed countries and problems of finance for mitigation, adaptation, capacity building of its infrastructure to reduce the side effects of the progress and development. Citizens of India do bear high hopes of a sustainable pathway of development which at the same time protects the environment for our future generations.

The current policy framework for environment flows from Constitution of India. Article 21 guarantees fundamental right to life and liberty which includes a right to clean environment. Article 48-A enshrines the principles of directive policy whereunder the State shall endeavour to protect and improve the environment and to safeguard the forest and wildlife of the country. Under Article-51A (g), it is the fundamental duty of every citizen of India to protect and improve the natural environment which includes the forests, rivers, lakes and wildlife and have compassion for living creatures.

Role of Judiciary:-

The experience in India over the decades show that the judiciary has always come forward as a protector of environment; Whether be it the construction of Tehri Dam and other Dams i.e. Narmada Sagar or on the Ganga in Himalayan States, stoppage of illegal mining e.g. in Bellary in Karnataka, in Goa, checking the rampant sand mining in Tamil Nadu and other States; attempts to encroach the pristine ecosystem of the Western Ghats. The Hon'ble Supreme Court has been monitoring the cleaning of Gangas on constant basis. The Hon'ble Supreme Court and the High Courts have come forward to protect the right of a clean environment as a co-commitment of right to life guaranteed under Article 21 of the Constitution of India to all persons. It has evolved the precautionary principles and Polluter Pays principles in the context of municipal laws as a necessary facet of sustainable development and for protection of environment.

Our own High Court in several such instances such as in relation to environmental degradation emanating from mining activity of Uranium in Jadugoda in East Singhbhum District, issued adoption of safety measures in respect of work or people living in neighbouring and mining area to protect them from the effects of nuclear radiation.

Jharkhand is rich in natural resources whether be it minerals, forest or wildlife. Approximately 40 percent of the country's mineral worth lies in Jharkhand; 27.6 percent of the total estimated reserves of coal are in Jharkhand; the forest cover in Jharkhand is approximately 29.61 percent as per India's State of Forest Report of 2011. Jharkhand

today is at a crossroads in its destiny. The challenge before it is to strike a balance between the development and progress of the State and at the same time, protection of its environment from degradation. Legislations regulating the exploitation of mineral resources and for conservation of forest and protection of environment are not in dearth. Stake holders from all the concerned departments are here today i.e. the Ministry of Forest, Environment and Climate Change, Government of Jharkhand, Department of Mines and Geology, Energy Department, Industries Department, etc.. Representatives of other departments are also present here today. So are the other stake holders from the Public Sector Undertakings and the private Sector companies operating in the field. The experts have widely expressed about the shoddy and poor enforcement of law by the Enforcement Agency. The institutions such as State Pollution Control Board, Ministry of Forest and Environment, the Indian Bureau of Mines should be able to enforce the conditions laid down at the time of clearance. It is important to monitor the performance of the Units after the environmental clearance has been granted. There is a need to invest in institutions which can provide oversight. Environmental impact assessment committees should be of specialists and should also be held accountable.

Each one of us owe a duty towards our future generations who are to inhabit this planet. The State Pollution Control Board is under-staffed and underfunded. It has to stand out as an institution of integrity, as huge responsibility lies on it to ensure that the conditions incorporated in the consent to operate certificates, the no objection certificates are stringently followed. Violators should be made to face penal consequences as provided under the law whether be it fine or criminal prosecution. The restoration or reclamation of the environment i.e. the huge void left after mining and deforestation should be compensated through aforestation and other measures. Jharkhand also has rivers which are like lifeline to its people such as Swarnrekha, Damodar, Kharkai, Ajay river whose ecosystem are at a severe threat from dumping of urban and industrial waste and pollution. We cannot loose these lifelines in the process of development.

A time has come to take a different and more nuanced approach. It would mean accepting

the fact that producing energy from flowing rivers is both a clean and renewable source of power as well as important resources for States like Himalayan States. It cannot be argued that no Dam should be constructed, but projects that kill the river or damage ecosystem, should not be allowed. Hydropower projects can be reengineered so that they can utilize the water that the river can afford to part with and not take all it has. Similarly, in other areas of development, we need a different way of governance in the coming years. Institutions for regulation, monitoring and enforcement have to be substantially revamped and strengthened. Balance between the environment and development requires working Institutions that can be trusted to take carefully evaluated decisions.

It is a fundamental right of every citizen to know the quality of air that he breathes and water that he drinks. The central and the State Pollution Control Board are required to set up Air Quality Index station at every important towns and cities. The Media has to play a very important role in disseminating information about the Air Quality Index in the daily newspaper and other electronic media in the same manner it provides information on rainfall, humidity, sunrise and sunset on daily basis. The people who are affected by degradation of environment through exploitation of natural resources need to be empowered to raise their voice against any threat to their right to life and clean environment. In the Assessment of Global Burden of Disease 2013, air pollution has been ranked as the 5th largest killer in India. The National Green Tribunal has taken serious concern of this issue especially in the case of the air pollution in Delhi in the month of March this year. Pollution Control Board needs to issue public health advisories to the people about severity of the air quality and protection that they need to take. Huge Ultra Mega Thermal Power Plants are going to come up in the State in the urge to meet the energy needs of the people to exploit the huge coal reserve underneath the surface of the State. Therefore, each citizen of the State needs to be made aware and conscious of the right to clean environment. This is the need of the hour and that is the relevance of the conference. We have to think ahead of the times to meet this challenge before it goes beyond our control.

Like me, each one of us present here have a selfish interest in ensuring clean environment for our children and future generations. Our generations need to live in conditions, if not better, then not worse than us. The atmospheric concentration of Co2 has crossed 400 particles PPM, as observed through two independent international observatories and institutions i.e. Mona Lua Observatory, US, HUWAI Observation, which has been monitoring CO2 levels for 55 years. The Scrips Institute of Oceanography has also found CO2 concentration increasing at 2 PPM level annually. Report of the Intergovernmental panel on Climate Change (IPCC) says it is all human induced. United Nations Climate Convention Pledged increase of 1.5 degree centigrade / 2 degree centigrade in global temperature compared to pre industrial levels. However, considering that the atmospheric concentration of CO2 has crossed over 400 particles PPM, the annual report of IPCC projects increase in global temperature of about 3.6 degree centigrade to 4.8 degree centigrade by the year 2100. This would mean rise of sea levels up to .98 meters, acidification of oceans, shrinkage of Arctic, sea cover, decrease of global glacier volume. These figures are not only alarming but also threaten the very existence of life and human beings on this planet.

Let us not wait further. Let us stand together in the fight against the climate change.

Gandhi as an Environmentalist:

- Today when we talk about sustainable development, Mahatma Gandhi's views appear highly contemporary.
- His focus on ***Swadeshi***, indigenous technology, village economy and austere life are all relevant as we are facing the wrath of nature due to rampant destruction of natural resources in the name of development. The debate is no longer about healthy economy versus healthy environment, rather it is healthy environment for healthy economy.
- Gandhi's advocacy of an uninterventionist lifestyle now seems to be the answer to the present day problem of global warming. The phrase "health of the environment" is not just the literary coinage. It makes real biological sense because surface of the

Earth is like a living organism. Without the innumerable and varied form of life that Earth inhabits, our planet will become like other parts of the universe-drab and lifeless where living things cannot exist.

- Gandhi was an apostle of applied human ecology who practiced life without meaningless consumption.

This is only the planet known to the mankind till date where life exists.

I, therefore, use this platform comprising of August audience to exhort each one of us to take a pledge today that we shall strive towards creating this mother Earth a livable planet, a Global challenge on which Dr. Kalam spoke even while he left for the heavenly abode on 27th July 2015.

Thank you.





Speech by

MR. RAJIV GAUBA, I.A.S.,

Chief Secretary to Government of Jharkhand

It is indeed a rare privilege to be able to share ones' thoughts with such a distinguished audience. We have Hon'ble Judges here, Chairperson of National Green Tribunal, Judicial Officers, who in the years to come are going to preside over on important environmental issues, cases, thus influencing the development trajectory of the State and in that sense the future of the generations to come. In short, shape the destiny of the State. I am not saying it for effect or to dramatise things, but, the truth is that the judicial orders and pronouncements have in our country played a very significant role in evolution of India's environmental architecture and if we continue to be so, I have no doubt in my mind, and therefore, for me it is a precious opportunity to share the State Government's perspective. So I may strike slightly different tone from what my distinguished previous speakers have said. In the morning Session, for example, the Chief Minister, the Union Environment Minister and Hon'ble Justice T.S. Thakur, there was a remarkable and very encouraging convergence of views about the need to strike a balance between environment and development. Now that is easier said than done. When it actually comes to taking decisions on the ground, for example, whether to build a particular dam or not, - a recent example will be illustrative. In our State, there is a great deal of enthusiasm or public support and the people are willing to give their land for building a new steel plant at Manoharpur. But, there are some people who say that it is close to an Elephant Corridor. Now, the issue is whose views should take primacy? Those, who are the local people or those who are environmental activists?

So, these are stark and difficult choices to be made on the ground and in order to understand as to how these decisions should be made. I think it is important to reflect on

who, in our country, shapes the environmental regulation and the environmental policies. What are the leading forces that have shaped India's environmental architecture. To my mind, three major forces have been at play -One, judicial orders either in PILs or based on *suo moto* cognizance; **two**, global environmental developments and the imperative of fulfilling commitments arising out of multilateral environmental agreements and, **three**, certain catastrophic events. If we look at the examples of judicial action, now Delhi's air quality today is a matter of concern. Earlier this week, on 5th October, the Hon'ble C.J. I made strong observations over the small children having to wear masks in Delhi. Now, the fact is Delhi's air is amongst the worst in world. According to some studies, it has the worst suspended particulate matter concentration. But, Delhi's air would be in much worse state but for certain seminal orders of the Supreme Court in the year 1999 in the motor vehicle pollution case, *M.C. Mehta Versus Union of India*, in which the Court prescribed stricter emission standards based on international norms, Euro -1, Euro-2 etc., which led to a whole host of measures, like introduction of catalytic convertors, mandating of CNG, lead free diesel, low sulphur diesel, ban on two stroke engine, so on and so forth. At a more fundamental level, in 1991, the Supreme Court expanded the scope for judicial action in environmental matters by interpreting as was mentioned earlier in the day the right to life under Article 21 to include healthy and pollution free environment, that was I think in *Charan Lal Sahu Versus Union of India* case on Bhopal Gas Leak. Similarly, in the *T.N. Godaverman* case, which, we all know the Court reinterpreted the Forest Conservation Act to extend its application to forests, as per dictionary meaning, and evolved the concept of continuing mandamus to pass a series of orders for forest conservation. Then in 1996 again, in the so called *Bichrey* case, *the Indian Council for Enviro-Legal Action Versus Union of India*, it upheld the polluter pays principle. So all of these have had a very-very major role in shaping India's environmental policies and laws and a salutary impact on improving the environment. **Second** the global developments. It was mentioned earlier Stockholm Conference which called for comprehensive country legislations. This led in India also to action both on the law front and on the institutional front. Before 1972, environmental

concerns were not part of the policy making environment. Environmental concerns were limited to basic issues, primitive issues, like – sewage disposal, sanitation dealt with in an uncoordinated manner by different agencies. In 1972, for the first time, a national committee was set up in the Department of Science and Technology, which eventually evolved into the Department of Environment but not a separate Ministry. It was still part of the Ministry of Science and Technology. Similarly, on the law front, there were several existing enactments like, the IPC, Cr.P.C., Factories Act, Forest Act, which provided some provisions for legal action against environmental pollution, but these were scattered provisions; they were not easily applicable particularly in the context of growing industrialization, urbanization and population growth. But, after Stockholm Conference in 1972, for the first time, in 1974 the Water Act was enacted, which was the first environment specific enactment and also gave birth to the first set of regulatory agencies in the shape of Central and the State Pollution Control Boards. Similarly, global conventions on chemicals and waste, like the Stockholm Convention, the Rotterdam Convention and the Basel Convention, Montreal Protocol on Ozone Depleting Substances and the climate change negotiations, though they do not mandate any action on the part of developing countries but they have led too various action plans, policies, so on and so forth. The **third**, is the Central Government, the Judiciary, the global development and the Centre. This is very important from the State's view point. The role of the Central Government or the Federal Government has evolved in a very round about manner. Under the constitutional scheme of division of powers, the subject of forest and wild life and protection of wild animals was originally in the State List. It was in 1976, during emergency, as part of the 42nd amendment, which is known for other things but, I think this is relatively forgotten, but is more enduring and impactful that this was moved to the Concurrent List, and as a consequence of that, Forest Conservation Act 1980 could be enacted by the Parliament, which has made prior approval of the Central Government mandatory for using forest land for non-forestry purposes. Now, here is a problem from the State Government's view that the forests are in the State, they are on the State Government's land but forest has

become a concurrent subject and Forest Conservation Act makes it difficult for the State Government or the Local Authorities to use even an inch of forest land without the approval of the Ministry of Environment and Forest and this is something which we will need to ponder whether it is a good thing or bad thing. Given this background, the Central Government and the environment is not listed in any of the Lists, to the best of my knowledge; land and water are the State subject, except inter-State rivers development and regulation. Given this background, the Central Government resorted to the expedient of the power under the Constitution to implement decisions taken in International conferences to enact the Environment Protection Act, 1986. The Water Act, 1974 on the other hand was enacted on the basis of authority given to it by resolutions of the State Legislatures. I mentioned the role of some catastrophic events in shaping India's environmental architecture. During the early hours of December 3, 1984, methyl isocyanate, highly toxic gas, leaked from the Union Carbide Plant, at Bhopal which was by far the worst industrial disaster, the world had ever seen. The immediate death toll was 2500, eventual number being much higher and then thousands of people suffered permanent disabilities and effects like premature deaths and the deformity of children persisted long thereafter. This led to the creation of the Ministry of Environment and Forest. One month later, many people don't remember that is how the Ministry of Environment and Forest was born in Government of India by merging the Ministry of Environment under the Ministry of Science and Technology and the Department of Forest which was under the Ministry of Agriculture. And a year later, in 1986, the Parliament enacted the Comprehensive Umbrella Legislation called the Environment Protection Act and all the specific rules like the Municipal Waste Rules, the Plastic Rules, the Hazardous Waste Rules have been enacted under this. So, we have seen how the Central Government, the Judiciary, and the global developments have played a role in evolving India's environmental architecture both the institutional framework and the regulatory systems, but where is the State Government in all these things. The civil society has been a great catalyst and the civil society has been active in highlighting environmental concerns and

spotlighting cases on non compliance but, whether by design or accident, the balance of power had shifted to the Centre, the Parliament which has been legislating almost exclusively on environmental issues and the Ministry of Environment and Forest Government of India, which has been playing a dominant role in environmental policy making and in day to day decisions. The *first point* that I want to make is that this is not, in my humble view, entirely consistent with the federal spirit of the Constitution and *secondly* the underlined premise that States are somehow less responsible than the Central Government is perhaps not correct. In fact I would like to use this opportunity to make the point that the State Governments are perhaps better placed to reflect people's concerns and aspirations than other stake holders and the State's political executive has a deeper understanding of the requirement of people and have direct accountability to the people. The need of the hour, therefore, is to revisit this situation and correct the balance. in fact, I would like to go one step further and say that even the local elected governments should be given some say and participation if we want to also make them responsible in environmental decision making. I think the local communities need to have a greater voice than the external NGOs.

There is no doubt that in our polity there is a broad consensus on the need for sustainable development, there are hundreds of definitions of this term but the most commonly accepted is part of the Bruntlands report. It says that you should be able to meet the needs of the present, without compromising the future generations, but it means different things to different people and the question is that who decides the vexed issues, which I mentioned early whether a project should be located at a particular place or not, how should trade of between building a road or a dam and cutting down trees should be resolved. What is the most critical threat to a State like Jharkhand in the environmental context, whether we should spend our finite human and financial resources on rising carbon dioxide emissions and global warming or more mundane issues like better management of urban solid wastes and tackling the discharge of effluent into our rivers like Damodar. It is a question

essentially of prioritizing the use of our limited human and financial resources and has to be function of a State's stage of socio-economic development. I have to say for example that we find it difficult in the States, the situation that we have to petition the Central Government for diverting forest area for non-forest purposes even for building a small project like a High School or widening a road, why should that be so. How is a Committee of Forest Officers in the Union Ministry more responsible or better placed to take this decision than similar set of officials or a similar mechanism in the State Government, i.e., the question I think we should need to ponder. There are some very ground level issues, I would like to mention in this regard that there are States like Jharkhand where the area under forest cover notified forest are comparatively larger. There is very little land outside the notified forests, but, the compensatory afforestation provisions are applied uniformly across the country, so we find it difficult to provide land for compensatory afforestation and on the other hand, there are notified forests, which are notified on the Count but were actually completely denuded, we could plant trees there. They will serve the same purpose, but since the decision making and the policy is so centralized, it works to the disadvantage of the States like Jharkhand. Another point which I want to make is that this whole discussion on environmental issues is that global examples are important, but they have limited relevance. I think this point was very eloquently made by Hon'ble Mr. Justice T.S. Thakur in the morning that climate change for example, that the responsibility for today's situation is that primarily almost entirely of the industrialized country and the Kyoto protocol was mentioned. Kyoto protocol was, I think in 1997, the agreement was reached at Kyoto. United States did not ratify, of course did not ratify, but, I think small fact which should be of interest is that United States did sign the agreement in Kyoto, but every country has then to ratify it in their Parliaments and in the United States Senate this was rejected by 95-0, not a single senator either democate or republican was prepared, there was such a convergence of political or public interests in that country that this is going to hurt our standard of living, our industry, jobs are going, so they refused to. So, I think we should be mindful. I had the privilege of representing India, as the negotiator, the Chief

Negotiator in Stockholm convention, Rotterdam convention and the Basel Convention. United States is not a signatory to any of these conventions. In all the conventions there, their representative come, sit as an observer and I have seen in these conventions, I will give some examples. DDT for example, was held at one point of time as a wonder chemical, it is because of excessive use of DDT and its impact on the thickness of the ostrich cells, egg cells, which were described in that epoch making book called Silent Spring written by Rachel Carson, I think, which led to global environmental movement and all that, that the western world said that now ban DDT. We in India and several other developing countries in sub sahana natives which are combating the menace of malaria and kala jar have been fighting in those forums that we cannot ban DDT unless we have more cost effective and safer substitute. So what happens in the international conventions and the discussions there is that the corporate interests of the western world and their self interests combine, they are more vociferous than us and some times the NGOs in our country play into their hands not realizing that we also should first worry about our national interest and take more holistic and a balanced view of things. It was mentioned earlier by several distinguished speakers that in the context of Jharkhand, nature has blessed Jharkhand with fabulous wealth. We have mineral reserves, which are capable of transforming this state into the richest in the country but if mineral reserves are our USP, then we have to use them because of the locational advantage that we have. Jharkhand can prosper only if we are able to fully use these resources, build steel plants, build thermal power plants at the pit head of course. As a responsible government, we have decided to expand our solar power capacity, but, again as was mentioned earlier in the day, bulk of our power requirement in the country will continue to be met, there is no option through the thermal power stations. So, we need mining, we need thermal power plants, yes, we have to do all these in an environmentally sustainable manner, adopt the best practices, adopt the state of art technology and today it is possible to do so, but, we cannot do it overnight, because it is expensive. So, in conclusion, I would only like to say that in the debate of environment versus development, there is need for all of us to have sobriety and certain

mode of balance and take a holistic view of things and emphasise more on strengthening compliance, which was very well put earlier – we need to strengthen the capacity of the State Pollution Control Board, which are weak organizations – they do not have necessary man power, they do not have laboratories, so on and so forth, that we need to strengthen, we need to make industry more responsible, we need to increase voluntary disclosure so that people can see for themselves online monitoring systems etc., rather than blanket bans, which some times happen and I think while taking those decision, we should also spare our thought for lacs of people who go out of jobs for years to come and I think there is the surest way of pushing them in the direction of violent ideologies.

Thank you.













**Conference on
Environmental Issues and Climate Change
Jharkhand Chapter**



TECHNICAL SESSION – I

ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT

Evolution of Environment Regulations and Institutional Structure : *An Overview*

Mining & Power : *Impact on Environment*

Coal, Iron Ore and Other Metallic Mines : *Environmental Impacts and Law*

Industries and Power Plants : *Environmental Impacts and Law*

Role of Regulatory Bodies

Remedial Measures

Chairperson : *Hon'ble Mr. Justice M.Y. Eqbal*

Judge, Supreme Court of India

Co-Chairpersons: *Hon'ble Mr. Justice Aparesh Kumar Singh*

Judge, High Court of Jharkhand

Hon'ble Mr. Justice S. Chandrashekar

Judge, High Court of Jharkhand

Speakers : *Mr. Rajiv Gauba*

Chief Secretary, Government of Jharkhand

Dr. Arun Mohan

Sr. Advocate, Supreme Court of India

Dr. Vinod Tare

Professor, Environmental Engineering and Management

Programme, IIT Kanpur

Broad Areas of Discussion, Concerns & Solutions

- **SUSTAINABLE DEVELOPMENT** : Hon'ble Mr Justice M.Y. Eqbal introduced the subject on the note that the development process is a constant endeavour to maintain balance between the human need on one hand and preserving the natural resources and ecosystem on the other, on which we and our future generations depend. The session dealt with environmental protection and climate change vis-à-vis sustainable development and also discussed about the India's commitment towards no carbon pathway and promising improvement in the field of most pollutant areas such as thermal power generation. It also discussed about the need for enforcement of 'right to clean environment' under the Constitutional framework, need for strengthening the pollution control boards by increasing financial and institutional capacity, so that regulation would be of priority. The role of media in creating awareness about the air pollution came up in the discussion. There was consensus on the need for adoption of Gandhian policy of non-interventionist life style with environmental sensitivity.
- While dealing with the issues of environmental protection and possible measures in State of Jharkhand, the need for establishment of a system with proper checks and balances to ensure sustainable conservation was highlighted. The need for establishment of public grievance hearing mechanism, sitting at an interval of every five years or so has been emphasized.
- The need for awareness creation and education among the public about the first principles of environmental protection was the core of Dr. Mohan's presentation. The need for localization of the information relating to environmental regulation by translating the same into local languages in a simplified version, communication of



the same through various modern technological tools has been suggested as the best possible way to reach to all sections of the people. The need for establishment of a central body acting as a custodian of all the information, central point of preservation and dissemination of information has been suggested as a solution.

**Hon'ble Mr. Justice Aparesh Kumar Singh,
Judge, High Court of Jharkhand**

Hon'ble Mr. Justice Aparesh Kumar Singh elaborated on the concept of Sustainable development saying that it encompasses the three general policy areas namely, economy, environment and society. Various definitions of sustainable development have been enunciated from time to time. Different models of sustainable development have also been propounded over a period of time. Different indices of sustainable development have also been developed by the experts and scientists. Such multi-dimensional development indicators show a link amongst the community, economy, environment and society. For example, Gross National Happiness (GNH) is coined by Bhutan's King Jigme Singye Wangchuck in 1972. The four pillars of Gross National Happiness are promoting equitable and sustainable socio-economic development, preservation and promotion of cultural values, conservation of natural environment and establishment of good governance.



- India's Intended Nationally Determined Contribution (INDCs) working towards climate justice, contains the following proposals:
 - i.** Sustainable lifestyle
 - ii.** Cleaner Economic development
 - iii.** Reduce Emission and intensity of Gross Domestic Product (GDP)

- iv.** Increase the share of Non-Fossil based Fuel electricity
- v.** Enhancing Carbon Sink (i.e. the Forest)
- vi.** Adaptation
- vii.** Mobilizing finance; and
- viii.** Technology transfer and capacity building

It declares a voluntary goal of reducing emission intensity of its GDP by 20-25 percent of 2005 levels by 2020 despite having no binding mitigation obligation as per the convention. INDC lays thrust on renewable energy, promotion of clean energy, enhancing energy efficiency, developing climate resilient urban centres, abatement of pollution and India's effort to enhance Carbon Sink through creation of forest, sustainable green transportation as some of the measures for achieving this goal. It professes the urban transport policy, a mass Rapid Transit System. In the field of renewable energy, it has set up targets of 175 giga tones by 2022 which is supposed to result in abatement of 326.22 million tones Co₂ Equivalent per year. The range of ecosystem, goods and forest services provided by forest includes carbon sequestration storage. According to the paper, forest and tree cover presently amounts to 24 per cent of the geographical area of the country. It plans to focus on sustainable forest management, afforestation and regulating diversion of forest beyond any non-forest purposes to increase its carbon stock. It proposes long term initiatives and programmes like Green India Mission, Green Highways Policy and Financial Incentive for afforestation and plantation along river, REDD + i.e. reduce emission from de-forestation and forest degradation and compensatory Afforestation Forest Fund Management and Planning Authority.

- Developing countries like India have always faced resistance in transfer of technology by the developed countries and problems of finance for mitigation, adaptation, capacity building of its infrastructure to reduce the side effects of progress and development. The developing countries should come forward in our effort and help us in switching over to clean energy. It is an investment which the developing

countries should make in order to ensure that we do not go beyond 1.5 Metric Tonnes per capita.

- Jharkhand is rich in natural resources whether be it minerals, forest or wildlife. Approximately 40 percent of the country's mineral wealth lies in Jharkhand; 27.6 percent of the total estimated reserves of coal are in Jharkhand; the forest cover in Jharkhand is approximately 29.61 percent as per India's State of Forest Report of 2011. Jharkhand today is at a crossroads in its destiny. The challenge is to strike a balance between the development and progress of the State and at the same time, protection of its environment from degradation. Legislations regulating the exploitation of mineral resources and for conservation of forest and protection of environment are not in dearth.
- There appeared a consensus on shoddy and poor enforcement of law by the Enforcing Agency. The institution such as State Pollution Control Board, Ministry of Forest and Environment, the Indian Bureau of Mines should be able to enforce the conditions laid down at the time of clearance. It is important to monitor the performance of the Units after the environmental clearance has been granted. There is a need to invest in institutions which can provide oversight. Environmental impact assessment committees should be of specialists and should also be held accountable.
- The State Pollution Control Board is under-staffed and underfunded. It has to stand out as an institution of integrity. A huge responsibility lies on it to ensure that the conditions incorporated in the consent to operate certificates, the no objection certificates are stringently followed. Violators should be made to face penal consequences as provided under the law, whether be it fine or criminal prosecution.
- Jharkhand also has rivers, which is life line to its people such as Swarnarekha, Damodar, Kharkai, Ajai whose ecosystem are at a severe threat from dumping of urban and industrial wastes in pollution. We cannot lose these lifelines in the process of development. They can be utilized for producing energy from rivers which is both a clean and renewable source of power as well as are being utilized in Himalayan

States. It cannot be argued that no dam should be constructed but projects that kill the river or damage ecosystem should not be allowed. Hydro power projects can be reengineered so that they can utilize the water that the river can afford to part with, and not take all it has. Similarly in other areas of development, we need a different way of governance in the coming years.

- The Central and the State Pollution Control Boards are required to set up Air Quality Index Stations at every important towns and cities. The Media has to play a very important role in disseminating information about the Air Quality Index in the daily newspaper and other electronic media in the same manner it provides information on rainfall, humidity, sunrise and sunset on daily basis. The people who are affected by degradation of environment through exploitation of natural resources need to be empowered to raise their voice against any threat to their right to life and clean environment. In the Assessment of Global Burden of Disease 2013, air pollution has been ranked as the 5th largest killer in India. The National Green Tribunal has taken serious concern of this issue especially in the case of the air pollution in Delhi this year. Pollution Control Board needs to issue public health advisories to the people about severity of the air quality and protection that they need to take. Huge Ultra Mega Thermal Power Plants are going to come up in the State in the urge to meet the energy needs of the people to exploit the huge coal reserve underneath the surface of the State. Therefore, each citizen of the State needs to be made aware and conscious of the right to clean environment.

**Hon'ble Mr. Justice S. Chandrasekhar,
Judge, High Court of Jharkhand**

Hon'ble Mr Justice S. Chandrasekhar Judge High Court of Jharkhand took the deliberations forward and proposed institutional mechanism like ombudsman to ensure strict compliance with pollution norms.

- The major cause for pollution is the mining and mineral based industries. The coal-fired power plants have also contributed to the environmental degradation.

Under the 2006 EIA Notification, all major projects are required to take environmental clearance. There are elaborate procedures for public hearings, appraisals, commitments are made and then finally environmental clearance is granted. But thereafter,



there is no mechanism to monitor the compliance with the environmental norms, except that the industry has to submit half yearly compliance reports. The following measures can be initiated by the industry.

- Let all the industries must have Ombudsman within their own organization. That should be the “first port of call” for filing complaints against the companies. Once a complaint is filed it should be forwarded with specific recommendations and copies given to the complainant.
- The next step would be in the line of public hearing not exactly the public hearing we all know. The environmental clearance for the mining industry was granted for 30 years initially, then the renewal was for about 20 years. In between there is no mechanism to assess whether the commitments made by the industry have been fulfilled by it or not. Let there be public hearings at the interval of 5 years or so not strictly in line or in tune with the mandate of 2006 EIA Notification, but may be in the form of public grievance hearings and at the end, the Government may “issue supplementary compliance schedule”, give the industry some time to make it comply with the commitments which it initially made or which at a later stage it is felt that the industry should also do.
- Environmental awareness: Let the people know about their rights under the present environmental laws. In the State of Jharkhand the tribal people, the poor people, cannot be expected to know the nuances or their rights under the Environmental laws. The Companies as a part of their obligations of corporate social responsibility,

should undertake to make people aware of their rights so that people become more vigilant about environmental causes.

- Under the right to Fair Compensation Act, 2013, once the award is made and initial commitments have been fulfilled, there is no mechanism to see whether there was any need for upgradation of the facilities and whether there was any need for maintenance under Schedule 3 of the Act. The Industry has to provide roads, basic health facilities, drinking water, basic amenities, all these facilities require regular maintenance and upgradation. But once award is executed, there is no mechanism to enforce the industry to continue with its initial commitment.
- 2015 Mines and Mineral (Development and Regulation) Act, the right of the community to the mineral wealth has been recognised. There is a provision for a foundation i.e. District Mineral Foundation and a part of the royalty would be deposited and it would be spent on the development and for the benefit of the society. Now why the industry cannot do the same when the Government is ready to part with its income. Let us see why the industry cannot part with their income when they are the beneficiaries. The land losers, the persons who were there for more than 100 years – more than 200 years, they have been evicted. Their right to mineral wealth is recognized by the Government. Now why the industries should not recognize their rights for basic minimum living facilities?
- Let there be a common drinking water facility. For example, in the city of Paris, 2.2 million residents and more than one million daily visitors, they all are provided drinking water by a single public utility system. In the United States, in the city of Washington, metropolitan area, only three companies are there. In London and the Suburbs, there are only eight Companies. Except United States, in England the King Edward VII Hospital, is being used by the members of Royal families as well as commoners. The Canada has the minimum mortality rate and highest life expectancy. They are spending 7.8% of their GDP only next to United States which spends about 40% of the GDP. The Companies, the Industries they must make a commitment to

continue with providing the basic facilities which they have undertaken under the 2013 Act.

Dr. Arun Mohan
Senior Advocate, Supreme Court of India, New Delhi

Dr Arun Mohan Senior Advocate

Delhi focused on Public awareness to environmental causes as it is critical for implementation of the Environmental Laws. This becomes necessary on two counts – One development of the Rules and Regulations; two – Development of methodologies to protect; and ultimately the more important



part is to get public support and not public resistance to the laws regarding environmental protection.

- The young ones who are the bright ones and are the future, they need to be educated and made familiar so that they can think on first principles and develop our own mechanism.
- The public has to apply its own mind and then prevent. Dr. Arun Mohan explained methodology for spreading education by applying technology. This was demonstrated by a one sheeter distributed by the speaker (copy attached marked as Enclosure). In our country, going by national figure, only 10% are able to read properly in English and converse, 41% is Hindi and 49% other languages. Now this is as far as language issue is concerned.
- It was stressed by Mr Mohan that there was need to set up a Central Body where all research material, the technical material can be collected and from it materials from English can be prepared. This material could serve as an information bank which can be translated into Regional languages with the aid of computer. With a dig-lot book English, on the left and any choosable Regional Language on the right. Just

a click on the computer in a PDF File, that file can be printed out anywhere in the country prepared by the Central Body and any body may publish. It can be as simple as to be read by a person who can barely read.

- A very effective medium today for dissemination of awareness can be Video DVD. They are cheap and twenty rupees a piece, the Video DVD can be duplicated from the bank fo information from the Central Body. One more advantage the Video DVD of today has, i.e.,it can have sub-titling in any languages and that is switchable by the remote. This mode can be utilized with more effect particularly for adults.

**Sri Rajiv Gauba,
Chief Secretary, Government of Jharkhand**

Sri Rajiv Gauba, Chief Secretary, Government of Jharkhand presented the Govt view point on the subject. He pleaded for considering the public cause and concern for empoyment, raising the living standard along with environmental issues.

- It was urged that the plight of Lacs of unemployed can not be lost sight of in the Environmental Discourse. Voice and interest of local populance need to be heard in deciding Environmental issues rather than environmentalists and NGOs working from far away places.



- Sri Gauba raised an apt question as to who's voice should be heard when it actually comes to taking decisions on the ground, for example, whether to build a particular dam or not, - a recent example will be illustrative. He cited an example of proposal to build a new steel plant at Manoharpur which was enthusiastically welcomed with public support and the people were willing to give their land . But, there were some people who say that it is close to an Elephant Corridor. Now, the issue is whose views should take primacy? Those, who are the local people or those who are environmental activists?

- So, these are stark and difficult choices to be made on the ground and in order to understand as to how these decisions should be made. I think it is important to reflect on who, in our country, shapes the environmental regulation and the environmental policies. What are the leading forces that have shaped India's environmental architecture. To my mind, three major forces have been at play -One, judicial orders either in PILs or based on suo moto cognizance; two, global environmental developments and the imperative of fulfilling commitments arising out of multilateral environmental agreements and, three, certain catastrophic events.
- Forest Conservation Act 1980 has made prior approval of the Central Government mandatory for using forest land for non-forestry purposes. Now, here is a problem from the State Government's view that the forests are in the State, they are on the State Government's land but forest has become a concurrent subject and Forest Conservation Act makes it difficult for the State Government or the Local Authorities to use even an inch of forest land without the approval of the Ministry of Environment and Forest and this is something which we will need to ponder whether it is a good thing or bad thing.
- The Parliament which has been legislating almost exclusively on environmental issues and the Ministry of Environment and Forest Government of India, which has been playing a dominant role in environmental policy making and in day to day decisions. The first point that I want to make is that this is not, in my humble view, entirely consistent with the federal spirit of the Constitution and secondly the underlined premise that States are somehow less responsible than the Central Government is perhaps not correct. In fact I would like to use this opportunity to make the point that the State Governments are perhaps better placed to reflect people's concerns and aspirations than other stake holders and the State's political executive has a deeper understanding of the requirement of people and have direct accountability to the people. The need of the hour, therefore, is to revisit this situation and correct the balance. The local self elected governments should be given some say and participation if we want to also make them responsible in environmental decision

making. I think the local communities need to have a greater voice than the external NGOs.

- What is the most critical challenge to a State like Jharkhand in the environmental context, is whether we should spend our finite human and financial resources on rising carbon dioxide emissions and global warming or more mundane issues like better management of urban solid wastes and tackling the discharge of effluent into our rivers like Damodar. It is a question essentially of prioritizing the use of our limited human and financial resources and has to be function of a State's stage of socio-economic development.
- There are some very ground level issues, I would like to mention in this regard that there are States like Jharkhand where the area under forests cover notified forests is comparatively larger. There is very little land outside the notified forests, but, the compensatory afforestation provisions are applied uniformly across the country, so we find it difficult to provide land for compensatory afforestation and on the other hand, there are notified forests, which are notified on the Count but were actually completely denuded, we could plant trees there. They will serve the same purpose, but since the decision making and the policy so centralized, it works to the disadvantage of the States like Jharkhand.

Dr. Vinod Tare

Professor, Environment, Engineering & Management Programme, IIT, Kanpur

- We should have a balance between environment and development, but when it comes to taking action on the ground, it is really very hard. If suppose for some reason we take a project and that is likely to get eliminated or some important species are going to get extinguished, what is the cost nation is going to pay. I think we do not have that information and we take decisions invariably and even the judgments, in my opinion, are made, because we do not have that kind of reliable information. Depending upon who has louder voice, louder I do not in literal sense, who can penetrate to the insight and convince.

- Tanaries in Kanpur, 30 years back also we were at the same place even today we are also discussing what to do with the Tanaries. In Kanpur, it is well known that the Tanaries do discharge their waste waters and very often arguments are given and we



believe that the Tanaries should adopt reuse recycle policy and this is our general recommendations, we transfer data, information whatever that were collected. We believe that if you want to internalize pollution to river Ganga in the development into the industrial processes, typically pricing are valuing water is very important. In our opinion, if somebody wants to wash leather or hides with Ganga Water, fine, but then you should pay for the quality of the water that he is using for the leather and washing hides. In my opinion, our opinion, that price should be at least 1 ½ times the cost of making the tannery effluents to the same level. If you do not do this, then the tanneries will have no incentive too then the question we will ask is if you suggest this kind of recommendation, nowhere in the world it is there and so on and so forth, why are we doing this. We would run from calculation ultimately what is the effect, the shoe that you wear, if you are buying it for Rs.3000/- and if I impose this kind of restriction to the tanneries that know if you do reuse recycle or if you want to take Ganga Water, it will cost 1 ½ times the final cost is going to be Rs.3050/- for the shoe that you pay. If somebody still wants to use this bottle water for washing hides, let him pay the Rs.20/- a litre. If that price is fixed, in that case, the tanner will automatically, when given the option, he will not go for such a high quality water, he will use only the quality of water that is required.

- I would have at the Centre like to create a good set up information on forest various kind of city and share that knowledge with the State Government and leave it to the

State Government what do you do with that, rather than the Central Government giving a permission, so, to me, many of these organizations should be knowledge bodies and they should derive their authority not by having authority to give permissions or licences or whatever, but authority through knowledge, right. They should have a common information bank. Today where is the information about Ganga River Basin? Various aspects that we talk about tanneries, how much does it cost? What will happen to the tanneries? Will they really close down? None of that information we have.

- We say pollution control boards have not been very effective and we say they are not effective, do we really want to make them very fat bodies? Can we really go through policing? or we should be able to control through knowledge? If you try to create that kind of force and ask the pollution control board to control and ultimately whom the pollution control board who are their bosses, if they have to report to their Chief Secretary or the Principal Secretary, how can they go against the well wish or whatever of the State Government. I think some of these issues that we need to address.
- One thing that like for example if you take Singapore, a small country, the maximum length of the river is about 100 km or so. For Ganga, we talking about 2500 kms. and 8 times, the width of river Ganga is about 20 – 30 kms. that is the magnitude that we talk. Who is going to pay the cost for cleaning of Ganga? How much is the cost? Do we really have this kind of information? Unless until we take those decisions based on that we make policies and we need to move away from the policies and anti pollution laws.
- We are suggesting that we need a framework to protect Ganga Basin. Who is the custodian today of the Ganga Basin? Does any body have, who is the body who has all the kind of information of the Ganga Basin and then can tell OK this activity can be allowed and this activity cannot be allowed and so on and so forth? So I think we need to move in that kind of framework and unless there is long term commitment

to clean up our Ganga and moving in a particular direction, we will be just spending our resources and this what has happened in last 25-30 years.

- Whatever money has been spent, we have spent in creating assets, by and large those assets do not work the way they should have worked and that is another reason that people get a feeling that these are never going to work in Indian conditions.
- Environmental decisions are often not well informed and researched and it is taken, depending upon who has louder voice.



TECHNICAL SESSION-II

URBAN & BIO-MEDICAL WASTES – CAUSES, EFFECTS & CONTROL MEASURES

Chairperson : *Hon'ble Mr. Justice Arjan Kumar Sikri*
Judge, Supreme Court of India

Co-Chairpersons: *Hon'ble Mr. Justice Prashant Kumar*
Judge, High Court of Jharkhand.

Hon'ble Mr. Justice Ravi Nath Verma
Judge, High Court of Jharkhand.

Speakers : *Hon'ble Dr. D.K. Agrawal*
Expert Member, National Green Tribunal.

Sri. Binod Poddar
Advocate General, Jharkhand.

Sri Rajesh Biniwale
Principal Scientist & Head Cleaner Technology, NEERI, Nagpur.

BROAD AREAS OF DISCUSSION, CONCERNS & RECOMMENDATIONS

**Hon'ble Mr. Justice Arjan Kumar Sikri,
Judge, Supreme Court of India**

Hon'ble Mr Justice Arjan Kumar Sikri set the tone for discussion by raising some very vital issues of Management of Urban and Bio-medical waste because of increasing urbanization.



- On the one hand the new government has started the concept of smart cities, on the other hand urbanization is generating a host of wastes which includes plastic, electronic and bio-medical waste. Management of urban waste therefore assumes importance. In 1947 we became independent, Delhi was at that time hardly what it is today. It was not even 120th of that as far habitation is concerned and entire area was green area, with vast track of lands.
- Acts by themselves are not sufficient unless there is strict compliance of its provisions. Hon'ble Mr Justice Arjan Sikri cited the example of the DDA Act. In 1957 Delhi Development Act was passed and the main idea of this Act was for planned development of Delhi. But what is Delhi today? In spite of that Act the execution did not take place. Ranchi is also one of the cities which is earmarked for as Smart City now. Taking queue from Delhi the development of Ranchi should not be at the cost of its green cover and its ecological beauty.
- If we do not treat urban waste, then we are creating garbage and not only that and it leads to so many diseases. The same applies to bio-waste as well, so on the one hand hospitals are there to take care of the patients, to treat the diseases but then the bio-waste, if it is not treated it again breeds further diseases.
- The challenge is how to save silent sufferers the animals from the urban wastes?

**Hon'ble Mr. Justice Prashant Kumar,
Judge, High Court of Jharkhand**

Hon'ble Mr Justice Prashant Kumar introduced the subject to the audience and discussed the different dimensions of the topic.

- The conservation, protection and improvement of environment are the major issues all over the world. Industrialization, urbanization, explosion of population, over-exploitation of resources, disruption of natural ecological balances, destruction of

multitude of animals and plant species, for commercial reasons are the main factors behind deterioration of environment in our society.

- Jharkhand is a State of Industries, Mines & Minerals, and Forests. It is enriched with varieties of minerals, such as Coal, Copper, Mica, Uranium, Iron-ore, Bauxite and Lime-stone etc. The mining of aforesaid minerals, produce lot of wastes, both solid and liquid which pollute air, soil and rivers. After constitution of the State of Jharkhand, there has been an explosion in population of the State, especially in the capital city, Ranchi. Due to explosion of population, the production of various types of wastes has increased, which has affected the environment and climate of the State of Jharkhand.
- All human activities produce waste. Industrial waste, sewerage and agricultural waste and domestic waste pollutes water, soil and air. It can also be dangerous to human beings and environment. Similarly, hospitals and other health care facilities generate lot of wastes, which can transmit infections, such as HIV, Hepatitis B / C and tetanus, to the people, who handle it or come in contact with it. Some of the major types of solid wastes are as follows:

- Municipal Solid Waste
- Hazardous Waste
- The Bio-medical Waste
- Industrial Waste
- Agricultural Waste etc.



MUNICIPAL SOLID WASTE

Municipal Solid Waste is defined under the Municipal Solid Waste (Management & Handling) Rules, 2000 as the solid waste, which includes commercial and residential wastes generated in a municipal or a notified area which is either solid or semi-solid form, excluding industrial & hazardous waste. The municipal waste also includes

treated bio-medical waste. It has been noticed in most of the cities that the landfills are already overflowing with no space to accommodate fresh Municipal Solid Waste. Thus, with a view to manage the municipal solid waste, the Central Government had issued Rule i.e. Municipal Solid Wastes (Management & Handling) Rules, 2000, with a view to manage large quantity of Municipal Solid Waste. The aforesaid Rule recognizes various methods for management of Municipal Solid Waste such as landfills, composting, vermi-composting, anaerobic digestion, incineration etc. As the Municipal Solid Waste Rules gave the responsibility to the State Pollution Control Board for its compliance and thus thus, the State Pollution Control Board can take all these measures provided under the rule framed under the Pollution Control Act and by taking those measures these different types of wastes generated can be controlled.

HAZARDOUS WASTE

Hazardous waste means any waste, which by reason of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristic causes danger or likely to cause danger to the health or environment.

For management of hazardous waste, the Central Government had issued Hazardous Wastes (Management, Handling and Trans-boundary Management) Rules, 2008. The above Rule recognizes altogether five types of hazardous wastes, such as:

1. Toxic Waste
2. Reactive Waste
3. Ignitable Waste
4. Corrosive Waste
5. Infectious waste.

The common methods of disposing of hazardous wastes are landfill disposal and incineration. The industries can also be educated to generate less hazardous waste in manufacturing process. The toxic waste cannot be eliminated entirely, but by using the technology the same can be minimized by recycling and treating the waste.

BIO-MEDICAL WASTES

The Bio-medical Waste means any waste generated during the diagnosis, treatment and immunization of human beings or animals.

Bio-medical waste is generated from biological and medical sources and activities, such as the diagnosis, prevention, or treatment of diseases. Common generators or producers of bio-medical waste are hospitals, health clinics, nursing homes, medical research laboratories, offices of physicians, dentists, and veterinarians.

The improper management of bio-medical waste causes serious environmental problems to air, water and land. The pollutants that cause damage can be classified into biological, chemical and radioactive. There are several legislations and guidelines in India concerning environmental problems which can be addressed.

INDUSTRIAL WASTES

Industrial Waste means any waste generally generated by different types of industries during processing its items.

Industrial Wastes are toxic and thus, require special treatment. The industrial waste generally generated by different types of industries such as food processing industries, metallurgical, chemical and pharmaceutical units, breweries, sugar mills, paper, pulp industries, fertilizer and pesticides industries. The aforesaid industries discharge toxic wastes.

AGRICULTURE WASTES

Agricultural waste is the waste generated by agriculture such as crops and live stock.

The agricultural wastes generated by agro-based industries, such as rice milling, production of tea, tobacco etc. The agricultural wastes are rice husk, degasses, ground nut shell, maize cobs, straw of cereals etc. The aforesaid agricultural waste can be controlled by converting it into energy (through gasification, paralysis etc.). Animal wastes, food processing wastes and other organic matters are decomposed anaerobically to produce a gas called bio-gas.

- On one hand where e-waste could be controlled and recycled, medical waste and plastic wastes hardly come in the recycling frame.

**Hon'ble Mr. Justice Ravi Nath Verma,
Judge, High Court of Jharkhand**

Hon'ble Mr Justice R.N Verma Judge High Court of Jharkhand raised the issue of the medical waste which may be solid or liquid and is generated from biological and medical resources.

According to the ***Biomedical Waste (Handling and Management) Rule 1998*** of India, "Any waste which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals" is termed as Biomedical waste. Biomedical waste is unique in the sense that its generation and disposal is very site specific but poses a great threat since the improperly discarded medical wastes can turn into unimaginable dangerous situations as they are potentially infectious. Medical wastes primarily arise from hospitals and medical & biological research institutions, Primary Health Centres, Veterinary Colleges, Blood Banks, Dental Clinics, Slaughter houses, Blood Donation Camps, Vaccination Centres etc. which do not take proper care for the proper disposal of its wastes.

Now the question is what is Biomedical Wastes? The used cottons, saline bottles, needles, syringes, surgical gloves, microbial strains, hazardous chemicals, radioactive wastes etc. constitute the “Biomedical Wastes”.

The World Health Organization, commonly known as (W.H.O.) has classified medical waste into eight categories:-

- General waste
- Pathological waste
- Radioactive
- Chemical
- Infections to potentially infectious waste
- Sharps
- Pharmaceuticals
- Pressurized containers



One of the basic issues with biomedical wastes remains its non-degradability i.e. it cannot be degraded easily and would persist on the dump ground for long. Hon’ble Mr Justice R.N. Verma cited two real life examples:

“We all use ear buds manufactured under a famous brand name Johnson & Johnson. But we have also witnessed local ear buds of the same dimension being sold in local markets. There are possibilities that these small manufacturers use the discarded cottons collected from the healthcare units or institutions. Now can you imagine what health threat it poses if using the local ear bud comes in touch with the human body?”

“The surgical gloves are disposable. It must be used only once. But as a malpractice, it has been witnessed that small clinics and nursing homes, even some big hospitals, wash

the gloves, treat them with bleaching powder for further use. Don't you think this is a sheer malpractice which could lead to serious effects?"

The effects of these discarded wastes can even be detrimental. You all know that one of the most dreaded diseases AIDS is caused by HIV which is communicated among animals and humans through body fluids. If the disposed materials, which were recently used for someone with the known or unknown AIDS condition (contacted with any body fluid), come in contact with any person's body fluid unknowingly, the spread of infection becomes more pronounced. Same could be the situation with most of the communicable diseases also.

Centre for Disease Control and Prevention (CDC), USA has made it essential to classify and label the biomedical wastes as "**Biohazard**". As a simple rule and a matter of fact, a general guideline is required to be given to all the related institutions, the hospitals and laboratory to segregate these wastes in four different colour plastic disposable bags namely – black, blue, red and yellow. The **black bag** should be used for needles (without syringes), scalpels, blades, metal objects. **Blue bags** should be used for bottles, glasswares, discarded medicines and similar articles. **Red bags** be utilized for plastic wastes such as syringes, IV tubes, plastic saline bottles, catheters etc. Lastly, **yellow bags** should be used for infectious wastes, bandages, gauges, cottons, any object which came in contact with body fluids and body parts and placenta (after delivery). These handling procedures must be followed by effective and specific treatment options. Incineration and deep land burial are the two best methods to be followed at large scale. Incineration, which is a thermal treatment compared to a high temperature furnace, has been one of the best methods towards the disarmament of the medical wastes. Deep land burial must be at places far away from the population. Microbial samples must first be autoclaved (a laboratory moist heat treatment at 121oC and high pressure) and then discarded in the yellow coloured bag to be disposed by the land burial method.

The Supreme Court in **Subhash Kumar V. State of Bihar reported in A 1991 SC 420** has held that Right to Environment is fundamental right of every citizen. In a survey

conducted by Ranchi Municipal Corporation, a comparative chart of solid waste generation in Ranchi city of the year 2006 and 2013 and anticipated waste of 2016 was prepared, which is like this:

SI No.	Wastes	Years		
		2006	2013	2016
1	Biodegradable waste (ton per day)	89	134	149
2	Non Biodegradable waste (ton per day)	140	210	234
3	Recyclable waste (ton per day)	26	38	43
Total solid waste		255	382	426

*figures are in tonnes

So far as the regulation and management by developed countries like U.K. and U.S.A. are concerned, I must say that medical waste or chemical waste is closely regulated by different legislation. In U.S.A. also, there was a Medical Waste Tracking Act, but now after the period of the Act expired in 1991, all the 50 States of U.S.A. have been given the responsibility to regulate and pass laws concerning disposal of medical waste.

Hon'ble Justice Sikri summed up referring to Hospitals in Mumbai and Chennai which have some waste management systems and were given green level. All other cities including Delhi, where there are mushroom of hospitals and nursing homes there are no proper segregation of wastes. On the one hand we are claiming to generate health tourism in the sense that yes let people come from outside, on the other hand we have no proper waste management system.

**Hon'ble Mr. D. K. Agrawal,
Expert Member, National Green Tribunal**

Dr. D.K. Agarwal, Expert Member, National Green Tribunal focused on the various issues that are coming before the NGT and what was experience of NGT in respect of dealing with bio medical waste and municipal solid waste management.

Bio-medical waste consists of two components, non-infectious waste and risk waste. Almost 75-90% of the waste is non-risk waste which is not causing any problem, it can be disposed of safely, but, high risk potential is in terms of waste which amounts to 10-25% from the bio-medical waste. If



you further look at the typical composition of bio-medical waste, as here, I had tried to show you the non-infectious waste, is almost 80% then the other components which are present is radioactive, psychotropic and heavy metal which amount to 1% of the waste, sharps and needles constitute 1% of the bio medical waste, chemical and pharmaceutical waste is around 3% and the pathological and infectious waste is around 15%. Now the most important feature why it is very dangerous, just to highlight, in the year 2000 as per the WHO figures, it was estimated that 21 million people suffered from Hepatitis-B virus, because of infections created by improper disposal of bio-medical waste, two million Hepatitis-C cases infectious almost 40% of new infections were again because of this improper disposal of bio-medical waste. At 2.60 lakhs HIV infectious were caused 5% of the all new cases because of improper bio-medical waste disposal. Now the study seeks that how much bio-medical waste are generated from health care establishment. It is in Indian context it is said that 1-2 kgs of per bag per day of bio-medical waste is generated from Government and private establishments. These are figures pertaining to Government and private establishments, big hospitals, and not of small clinics. Approximately it has been quantified that 507 tones bio-medical waste is generated in whole country, out of which only 57% of the waste as of now goes for treatment. Rest 43% is going into municipal solid waste and is likely to pose threat to all of us.

- The bio-medical waste are generated from hospital labs research centre, animal research blood banks, mortuaries, autopsy centres, home care, cosmetic clinics, para-medics, funeral services, institutions, etc. They spread pollution through air, the second is the injection that is acquired from the hospital, if the needle is not

properly treated or it is not safe, then likely one can be affected by this bio-medical waste.

- Then, in Indian context, the biggest problem is of rag-pickers, whatever we dump as waste, is again picked up by these rag pickers and segregated. It is part of recycling which includes components like bio medical waste and other things and plastics. So this again infects people.
- The third element which is very important is the liquid waste which comes out from the hospital, not much is done in Indian context with respect to the liquid waste that comes out from the hospitals. Now this liquid waste can be very harmful because it may enter the human chains ultimately. It does not take care of truly many things. Are we treating liquid waste from hospitals properly? Because ultimately it may enter the water body and it may enter the food chain and affect the whole system and obviously at risk are the persons who are working in hospitals. Hazardous health waste can result into infection, geno-toxicity, cyto-toxicity, chemical toxicity, radio activity hazards physical injuries
- Now, the infections are generally caused by puncture cut in the skin, through mucous or membrane by inhalation or injection. So these are very small things which probably we do not realize but it could lead to very serious health hazard. The common infection that is caused by the bio-medical waste are
 - **Gastro enteric** through faeces and /or vomit e.g Salmonella, Vibrio Cholera, Helminthes Hepatitis A
 - **Respiratory diseases through inhaled secretions** like Mycobacterium tuberculosis, Measles virus, Streptococcus Pneumoniae
 - **Ocular infections through eyes secretion** like Herpes virus
 - **Skin infection through pus** e.g. Streptococcus spp

- **Meningitis through Cerebrospinal fluid e.g.** Neisseria meningitides The other infections that can take place from bio-medical waste are blood born diseases like AIDS, hepatitis, the fevers through body fluids etc.

➤ Now, to understand and treat the bio-medical waste properly, first we need to identify what are the sources from where these organism or bacterias are generated.

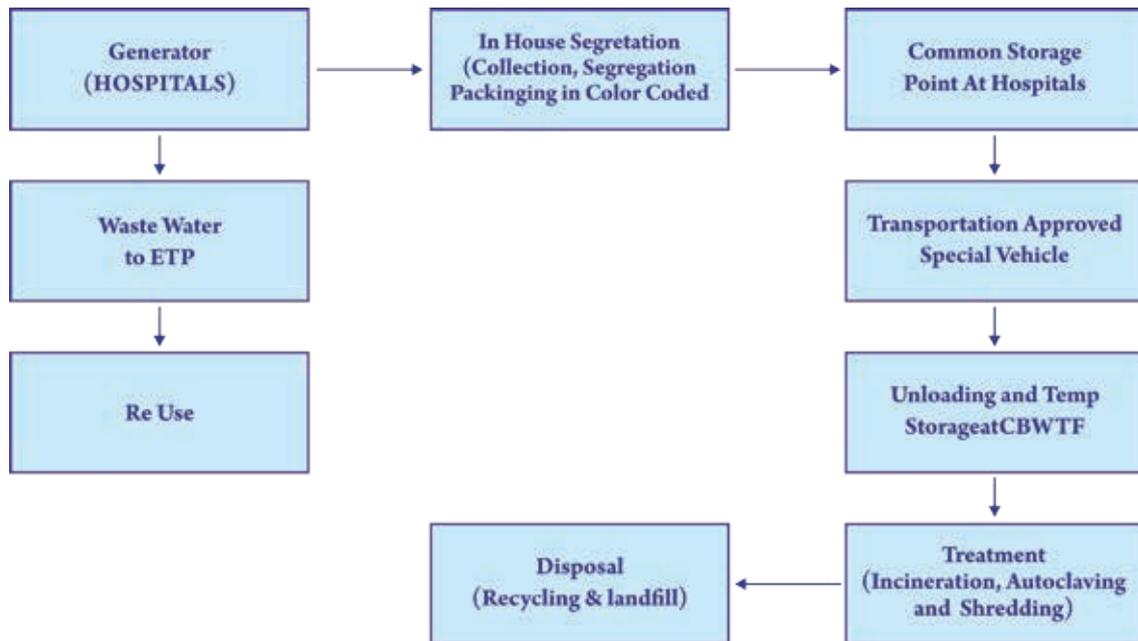
ORGANISM	DISEASE CAUSED	RELATED WASTE ITEM
VIRUSES HIV, Hepatitis B, Hepatitis A,C, Arboviruses, Enteroviruses	AIDS, infectious Hepatitis, Infectious Hepatitis, Dengue, Japanese encephalitis, tick-borne fevers etc.	Infected needles, body fluids, Human excreta, Soiled linen, Blood, body fluids.
BACTERIA Salmonella Typhi, Vibrio Cholerae, Clostridium Tetani, Pseudomonas, Streptococcus	Typhoid, Cholera, Tetanus Wound infections, septicemia, rheumatic fever, endocarditis, skin and soft tissue infections	Human excreta and body fluids in landfills and hospital wards, Sharps such as needles, surgical blades in hospital waste.
PARASITES Wucheraria Bancrofti, Plasmodium	Cutaneous leishmaniasis, Kala Azar, Malaria	Human excreta, blood and body fluids in poorly managed sewage system of hospitals.

- like viruses of HIV, Hepatitis B, Hepatitis-C. They are generated from infected needles, body fluids, humane excreta soiled linen body blood and body fluids.
- Now again this is one important aspect in whole of the bio-medical waste management rules that are in place, nowhere we talked about the human excrete and the soiled linen. The towels, the bed-sheets that are used in the hospitals, normally we have no provision as to how to deal with this. So these are the gaps in the provisions of the bio-medical waste management rules.
- It was only in 1980's probably when for the first time, when the Bio-Medical Waste Management Rules first time and we came out with some legislation to check this

menace in the rules of 1998. They were concerned only with the hospitals that too with respect to the number of beds that are available in the particular hospital, they categorized hospitals according to number of beds and those hospitals only were required to have bio-medical waste facilities, none other establishment were covered by the provision of 1998. But subsequently in 2011, amendments covered all the establishments whether it is small clinic, or whatever it is or pathological labs, veterinary hospitals everything has been covered, it is must for them to obtain authorization under Bio-Medical Waste Management Rules.

- Now, as far as the provisions are concerned in the Bio-Medical Waste Management Rules, there is provision for imprisonment upto five years with fine of upto Rs. One Lakhs or both and in case of failure, additional fine upto Rs.5000/- per day. But the real issue is implementation of these Bio-Medical Waste Management Rules. We have an implementing authority, implementing authority means mostly it is the State Pollution Control Board or the Body that is constituted under the provisions of the Bio-Medical Waste Rules and then we have the Waste Generator and then mostly in Indian context, to save the cost, majority of the health care establishments have gone for common facilities for transportation, treatment and disposal of bio-medical waste. So what they have done, they try to come out with a common bio-medical waste treatment facility.
- Considering the fact that we have health care establishment spread all over the town and for each establishment it is not feasible to have a bio-medical waste facility, so a coding system is there according to which, the hospitals segregate their bio-medical waste, it is collected and then transported through a designated agency to the bio-medical common facility, treatment facility.

Bio – Medical Waste Management : Flow Chart



- Now, again as you see generators, hospitals at the first places the in-house segregation, in terms of collection, segregation, packaging in colour coated poly bags it is taken to a common storage point in the hospital, it is transported through approved special vehicles and then they are unloaded on temporary storage at a common bio-medical waste treatment facility, treatment facilities include incineration auto-cleaving, shading etc and finally final disposal recycling or landfill as the case may be, and the other waste stream is waste water which goes to affluent treatment plant and is discharged into the drain or river.
- As per WHO standard various type of waste that comes out from the hospital they have been categorized into various categories, and there are treatment and disposal option that has been prescribed and even followed in case of our Indian context wherein into 08 categories these bio-medical waste are stored and transported and taken for treatment.
- A study carried out in 2013, as Justice Sikri also made a mention what is the level of awareness about these bio-medical waste facility. He made a reference about Mumbai

and Chennai this is also case study from Andhra Pradesh, where they conducted a survey among doctors, interns, nurses, technicians attendants and in house-keeping staffs. That is working in the hospitals health care establishment and that too we are talking of a metro city and it was found that even less than 50% of the staff working in the hospital, overall, is aware of the provision of bio-medical waste management. This report is depicted in the table given below:

Awareness of BMW Management and Treatment

Study Subjects	Total	Aware(%)
Doctors	56	43(76.8)
Interns	65	25(38.5)
Nurses	83	68(81.)
Technicians	44	12(27.3)
Attenders	78	23(29.5)
House Keeping Staff	57	11(19.3)

- So this is the real challenge of spreading legal awareness over subject of such significance.
- What are the issues that are serious concern in terms of bio-medical waste disposal?
 - Quantification of waste generated
 - Segregation at source
 - Collection and Categorization—Adequacy
 - Storage, Transportation & Treatment –Monitoring
 - Disposal of Liquid Waste—Adequacy (Separate drainage, functionality of ETP or STP)
 - Awareness
 - Coverage in rural areas, small clinics, Veterinary establishment

No.1 is quantification of waste generated because as per the provisions of Bio-Medical Waste Management Rules, 2011 an audit report has been made mandatory to be submitted

to the agency enforcing the Rule. But who monitors the data on day-to-day basis as to how much of waste is generated? Whether it has been properly segregated and transported to the bio-medical waste treatment facility? There is no mechanism in place to carry out these activities. Now, the third point is the collection and categorization what is the adequacy? There is no mechanism except for submission of annual audit report, there is or may be surprise check once in a while, which is very rare in our case, collection and categorization adequacy is the real challenge.

➤ **Storage transportation and treatment monitoring**

Again as per the provisions of the Rule, we have everything prescribed in the Rules of 2011 that how it is to be stored how it is to be transported and how it is to be treated. But who is monitoring these activities? Again, apart from surprise inspection, or own certification by the bio-medical treatment facility or the hospital there is no agency to monitor the provisions?

Disposal of liquid waste: Adequacy in terms of separate drain Now who is verifying whether we have separate drainage lines within the hospitals or health care establishment, for carrying liquid waste that contains infectious material and normal domestic waste and then functionality of ETP or STP as the case may be. Even 50% of the sewage that is generated in the country is not treated and whatever is treated, that is not treated upto the mark. None of the ETPs or STPs are working effectively in the country. So one as per the provisions of Bio-Medical Waste Management Rules, the only restriction that is there on the health care establishment is that you discharge into the public drain after doing some spray. What once even ETP ,STPs are not functional and only treatment facility of 50% is available what is the efficacy of old mechanism. That is a serious issue. Then, six is awareness because even in metros, the awareness level of provisions of Bio-Medical Waste Management Rules is very low. Then lastly I would like because we were dealing with another case, where we gathered data from at least Haryana, UP, we call for all the authorization that have been granted by the Pollution Control Board to various health care establishment

and our experience is that bio-medical waste authorization is not at all there in the rural areas, small clinics, because even doctors are practicing in their residence.

How they are disposing their bio-medical waste? So where is as per the rules, they are supposed to have authorization under the Bio-Medical Waste Management Rules.

- NGT has developed a model for waste management for Punjab Haryana and all other States have been asked to follow the same model with of course location specific variation. Dr Agarwal by his experience with NGT in dealing with the problem of municipal solid waste management highlighted the following points : **First** is the door to door collection of municipal wastes. In Indian context, because we have slums, unauthorized constructions, door to door collection is not possible which is possible probably where you have regular settlement. But the problem is how to collect municipal solid waste from unauthorized or illegal establishments and **second** thing, we have very small settlements. Size of the construction is so small that even they do not have proper space to have one bin or one basket for municipal solid waste and we are talking of segregation at source, probably they are required to have two dustbins. Even educated people are not willing to segregate municipal solid waste at home. So, how do we expect that whole of country will go for segregation at source. This is some challenges and requires serious consideration. We have western models where it is working very effectively. If we try to simply adopt in our condition it is not going to work. As I said already segregation at source, mindset of the people none of us are willing to segregate the municipal solid waste, space problem and willingness to pay, most important is. Are we willing to pay for these services? Because we feel that it is a service to be provided by the Government or municipality, whereas this requires a cost element. So are we willing to pay for these services. **Third** is transit collection and transport, because obviously once we are going to collect the municipal solid waste, we need to have a temporary transit point and then transported to the final disposal point. These are some considerations that need to be kept in mind. **Fourth** is selection of technology for final disposal,

disposal like probably it was mentioned, probably, we have so many options, landfill, incineration, composting but we are forgetting these are again various models which are available at other places, but in terms of Indian context, it is proven that the calorific value of the bio-medical waste that is coming out from household in India, is very low. For the simple reason that solid wastes with caloric value like plastics, papers and leather bags are taken out at the household level itself. Whatever is left is removed by the rag-pickers. So all the components which have some calorific value, is already taken out from the municipal solid waste, so it has a very low calorific value and it requires probably a different treatment than what is being adopted by the western countries. Then the fifth point is about availability of land. In view of the provisions of MSW rules, because, normally it is said that as per MSW Rules, 500 meters no human habitation, then wind wide direction you have some restriction and then each site should have the capacity to store for 25 years at least. So identifying such piece of land especially in proximity to the settlement is a real challenge. We have already so many constrains on the land. Agriculture land, forest cover, human settlement and then to identify this kind of piece of land where municipal solid waste management site can be established with the provisions of what municipal solid waste management rules is the real challenge. And that too, on a scattered level for every village panchayat, every municipality unit to have one site. So for this probably we need to go in for a cluster approach wherein we may divide one town with the adjoining rural settlement into one cluster and have common municipal solid waste management plant and this is what we have even trying and requesting all the State Governments to look into. The viability of PPP mode into the municipal solid waste management because right now most of the Governments are trying to focus on PPP mode. PPP mode because simple reason if we are trying to involve a private player into this, he is looking to his economical benefit probably where this is the service to the community and we not looking also this proposition.

Dr. Rajesh Biniwale,
Principal Scientist and Head, Cleaner Technology Centre,
National Environmental Engineering Research Institute, Nagpur

Dr. Rajesh Biniwale, Principal Scientists & Head Cleaner Technology Centre, NEERI, Nagpur

emphasised the need to look at the fate of the pollutants, because many a times we are shifting the problem from one place to other place or from one form to other form and not really dealing with that problem to stabilize environmentally benign material or a form which could be found.



What municipal solid waste is generally having is something like about 48 to 50% or 60% is the biodegradable waste and rest of the things are smaller. About 507 tonnes of bio-medical waste is generated. If I just go back for the similar figures for the urban solid waste and that too biodegradable waste, it is something like municipal solid waste is about 44 million tonnes per year has been generated in the country. This is huge amount of waste which we were talking .

- On the viability of PPP mode, Dr Biniwale stressed that most of the projects which have been on solid waste management or municipal solid waste to energy or such kind of value added product, have not seen success just because they were thought as a profit making ventures. Whereas, disposal of waste can not be planned on profiteering. If one spends 100 rupees and I am gets 10 rupees as a energy back, that is the additional incentive. We cannot earn 120 rupees on 100 rupees which was invested and 20 rupees profit, that is not possible in municipal solid waste. So we have to deal with it and what we need to do understand is we have to spend money for , may be, a value added product can also give a concurrent benefit of something like which we have converted into most usable form of that waste.
- As per the present law says that only inner should go to the landfill. No processable part of the solid waste should go to the landfill.

- The other important aspect is city-wise there are some variations as well, the site specific thing. There are to be site-specific approach as because there cannot be one solution applicable everywhere. So like for example, in I am just giving Pune and Pimpri situated next to each other, there is 33% of organic waste in the Pune whereas Pimpri has got 51%. So there is a difference there is difference of activity in that city and that farer would be some changes.
- And who contributes what, there are contributors, vegetable markets, hotels restaurant market area commercial and household, so household is about 40% which is the major contributors and others are not behind, they are just close to them, hotels and restaurant are around 25% and the commercials also 25%. Rest of the coming from market area and vegetable market itself.
- The best way is moving this in upper direction. More preferred way that means prevent, reduce, recycle, treat and dispose. Dispose should be the last option, because whatever we are trying to dispose which actually takes space which actually creates certain secondary pollutant such as leaches air pollutant and what not.
- Segregation is the key. Unless there is a segregation we don't think how difficult it is how we are going to deal with that we can debate on it but segregation is the most pre-requisite for this particular thing. Then the collection and transportation, recycling processing through various methods and ultimately only innate should go to that landfill.
- Lack of standardization of the processes and the equipments.
- The last point is there are no real success stories around till now. This is very beginning, wherefrom we learn the lessons ? May be we have lot of failure still to be documented as a lesson to be learnt.
- Echoing the apprehensions of Dr. Agarwal about the liquid waste coming out from the hospitals Dr Biniwale said that this is a very very dangerous situation, because most of the time this liquid waste which is coming out from the hospitals is being treated in STP or ETP using secondary biological treatments. The issue is there are kind of antibiotics or other medicines which are being administered to the patients and they are being passed by the stools and the urine into this kind of sewage, which are being

exposed to the secondary biological treatment, where bacteria are supposed to eat away those kind of organic product. Now this bacteria they learn they first die, some of them first die because they are exposed to antibiotic kind of thing, but then slowly they learn to eat it, they make it as a food. What is happening is you are generating a super bug which anymore cannot be killed by antibiotics, present antibiotics. These kind of contaminated water should not be allowed to contaminate the drinking water at any point of time otherwise probably the patients cannot be treated with the present antibiotics in future. What is the solution? If there is a problem, 110% there is a solution always existing. We need to understand it. The solution is to break this molecules before they are being subjected to biological treatment. Selection of proper technology is critical. You need advance oscillation process kind of thing included into the technology. So technology selections are largely to be driven by those who understand the technology in a fate of pollutant. If the fate of the pollutants is understood, then probably the technologies can be very well managed.

- Other may be briquetting making methods and using it as a solid waste as fuel or making it a compositing form for the smaller places this can be also the kind of small but effective tools to use, so that we avoid any biodegradable material to going to the landfill or being disposed of unsecured way. There are some other ways forward Bio-energy .
- In ***Brahmanand Puran*** which dates back to 800 years before Christ it has been said that there are 13 activities one should not do with the Ganga River. It is true for not only for Ganga, but it is true for any other river because most of the rivers in the country are revered as Ganga at their own place. We probably have forgotten these 13 activities. We have added 13 more to that for industrial activity was not present when the Brahmanand Puran was written. So probably, we have not understood the way we wanted to look along with the environment and that is what problem which we have.
- The problem arising out Flash floods caused by storms was highlighted. Because of water spills the pesticides, and chemical fertilizers, are run off with the storm water to water bodies, taking away lot of nutrients spoiling those water bodies ecology.

- Only 24% of the domestic sewage is being treated, rest of this is not being treated, it is going as such in the rivers and the water bodies. This figure was 11% sometimes back, now it is 24%. And that too installed capacity is rightly said those plants are not actually running. There is a report of 2005 by Centre Pollution Control Board and NEERI by examining some of the existing sewage treatment plant and 85% of them were found either not working or not working to their designed capacities. The technologies that will take minimum energy and these are like best stabilization pond very common in Karnataka, Haryana, to some extent Jharkhand also, they are commonly used best stabilization pond. NEERI has developed under the category of constructed wet land which is called phytotrid.
- Storm water carry nitrate and phosphate of the nutrients from the excess fertilizer being applied, same exists for every other pollutant such as sewage because sewage also get nitrate and phosphate and there are no method, there are no mechanisms existing in the conventional treatment system to remove nitrate and phosphate. Therefore, even treated sewage, goes to the water bodies they are liable to create problem of eutrophication that means that unwanted green algae breed development into the water pollution. So what we need to understand is again & again underline fate of the pollutant.

Dr Biniwale referred to some technology which has been very well referred to by various people, and is already a patented technology. Dr. Raghunath Machelkar's committee which was formed by Government of India, as seen and approved by Ministry of Drinking Water and Sanitation has approved this technology. Various Government started adopting this and Dr Biniwale recommended it to be adopted in Jharkhand also and NEERI has submitted the proposal to the Government of Jharkhand so as to taken up for their implementation.

Hon'ble High Court of Mahatrashttra has given a ruling that not a drop of untreated sewage or treated sewage should go in the Lonar lake anymore, because this lake is ecologically very important. Now that treated water is being used for irrigation purpose in the nearby farms.

- We already have a legal framework, which comprises of the following rules:
 - Municipal Solid Waste (Management and Handling)Rule 2000

- Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008
- Electronic Waste (Management and Handling) Rule 2011
- Bio-Medical Waste (Management and Handling) Rule 1998
- The Water (Prevention and Control of pollution) Act was enacted in 1974 and amended in 1988

The problem is that the large polluters are in the ambit of the laws, whereas, the small one because of some capacity which we have defined they are not into the system. Say for example in construction thing 20000 sq. meter and above only require environmental clearance and they require all sorts of institute treatment and everything to be added to their place. Whereas anyone who is building 5000 sq. meter is also polluting and if they are more than 80% of them, then we have to bring them into legal network by judiciary, or may be by local urban authority, but we need to include them into the system.





TECHNICAL SESSION – III

FOREST, WILD LIFE & CLIMATE CHANGE

Exploitation of Forest Resources, De-Forestation : *Impact on Environment*

Protection of Wildlife : *Planning, Research & Awareness*

Climate Change : *National & Regional Dimensions*

Chair Person : *Hon'ble Mr. Justice Shiva Kirti Singh*

Judge, Supreme Court of India

Co-Chairpersons: *Hon'ble Mr. Justice H. C. Mishra*

Judge, High Court of Jharkhand

Hon'ble Mr. Justice Ratnaker Bhengra

Judge, High Court of Jharkhand

Speakers : *Hon'ble Mr. Justice Dalip Singh*

Judicial Member, National Green Tribunal

Mr. P. R. Sinha

Country Director, IUCN

Mr. Ravindra Kumar Sinha,

University Professor & Head of Zoology Department,

Patna University, Patna

Sri M. P. Singh

Director, Forest Education, Ministry of Environment,

Forest and Climate Change, Dehradun

Broad Areas of Discussion, Concerns & Solutions

**Hon'ble Mr. Justice Shiva Kirti Singh,
Judge, Supreme Court of India**

Hon'ble Mr. Justice Shiva Kirti Singh while introducing the subject laid emphasis on the need to strike a balance between the need for development and the need to protect and preserve forest and wild life as it has always been part of our cultural heritage. Earlier the climate change was within the tolerable limits, there used to be drought; there used to be flood, but there was no concrete cause to panic. But now there is genuine fear and the fear is founded on facts that unless we take some precautionary measures and adopt proper attitude, future generations may suffer. All this requirement is because, as rightly said



yesterday, greed is taking over humanity. We are becoming more and more materialist. There is nothing wrong per se about it. Everybody wants to prosper and develop and to have more materials and means. Everybody wants to have a car, air conditioner, freeze, but what will be the effect of that, we have not calculated. There is no study on that. There has to be line somewhere, like in the bigger cities, because people are realising that the Govt should come out with some measures that if you want to own a car, you will have to pay through your nose, because you are encroaching upon the rights of others who want to acquire car in the coming years. So, the greed factor, the materialistic approach has to be kept under slight curb. I do not say that industrialist today are not aware of their social responsibilities. They are doing their best. At many places, in our towns, small towns, we see, hoards and placards go round about disclosing that the Tata and some other Corporates are maintaining this and that garden. But that is not the real essence of corporate responsibilities. There are companies in the business of mining. They are having 500-1000 acres of forest land. Initially, there could be no controversy that it was forest land. Out of necessity, mining operation has to be permitted. People need them,

country needs the resources for development. The State needs revenue. So we cannot find fault with the whole approach. The State permits de-forestation, but new approach, new discussion has yielded results. The Green Benches, Supreme Court Orders and green tribunal are now taking over; the orders say, to take over you are breaking the soil, de-foresting 100 acres will somehow ask the State to arrange 100 acres of land in lieu and you must undertake and do the forestation there.

- So, there is theory of compensation which has gradually developed. One who is causing the damage will compensate. The wrong doers should pay. I think that principle to a limit can be stretched even to citizenry and if we are generating beyond permissible limits wastes of any kind, that industry must bear the cost. Municipal corporations have limited income. So, we need to have some tax regime, some cess etc and that must be permissible and that one who causes the damages and causes pollution has to pay and therefore there is need of awareness as how to keep the people on their toes. If I commit a mistake, I must know that I am committing mistake, may be out of compulsion. I must compensate; I must pay and ensure the things are restored to maximum possible limit. So, this is the approach. We have to keep a balanced approach. Sustainable development is a very enigmatic term. Development is need. No body can doubt that. But at the same time, it should not be such development which will lead to some disaster in near future. You exploit all the coal and then suddenly find that the whole economy has shattered as you have not kept reserves or you do not take steps to ensure that there is further activities. Experts may tell you how to create carbon deposits, how to ensure by forestation, by further ensuring that in another 100 years you have the same amount of carbon deposits so that fossil fuel if required is again available. How to do it so that we do not deprive the future generations.
- We have to develop, but we have to see our individual interests, personal interests, family interest so that there is not much poison in the air, or poison in the water; we may survive as a nation.

**Hon'ble Mr. Justice H. C. Mishra,
Judge, High Court of Jharkhand**

Hon'ble Mr. Justice H.C. Mishra Judge High Court of Jharkhand

made a brief review of the overall state of Forest in India. The forest in India form about 23 % of the land area and particularly in Jharkhand, as we have told yesterday, i.e. about 30% . Forest help to maintain ecological balance. They maintain



the equilibrium of the climate, add to the fertility of soil, prevent soil erosion and promote perennial stream of water in the rain fed rivers. They also shelter wild life. When we talk of wild life, it is not restricted to the zoological life only; rather, it includes botanical life as well. They also bring revenue to the State, supply raw materials to the industries and act as a source of fuel and fodder and there lies the reason why there is the need to protect forest. Over ambitious human activities have resulted into serious concern for protecting forest, environment and wild life.

- No generation is authorized to misuse the natural resources in such a manner that it is not passed on to the future generation in the same form in which it had been inherited from the past generation. Justice Mishra captured the environmental concern in the words of saint Tulsi Das in *Ramcharit Manas* "*grah, veshaj, Jal, pawak Pai kujug sujog, hoi hai kuvastu suvastu jar lakhan sulakshan jog.*" which means that grah ausadhi, jal, wayu aur vastu-ye sabhi vashu kusang aur susang pakar bure ya bhale padarth me badal jate hain, which means that when they come in contact with good, they become good, if they come in contact of bad they become bad. This is the situation that has happened today.

**Hon'ble Mr. Justice Ratnaker Bhengra,
Judge, High Court of Jharkhand**

Hon'ble Mr. Justice Ratnaker Bhengra Judge High Court of Jharkhand

Reiterated the polluter pay principle as stated by Hon'ble Mr Justice Siva Kirti Singh and emphasised to de-centralize more of our resources and need to work on public elements like public transports etc. People resort to private solutions for want of proper public amenities. Public transports are not in good shape, therefore people favour private transport



- Justice Bhengra also made his presentation from the angle of Macro problems requiring macro financing. Some years back, there were attempts to get the world bank in livelihood and forestry projects. Solution lies in concentrating on core forest areas and to grow more forests as well as to increase livelihood. Unlike big dams, we would not have displaced lots of people. Without causing displacement caused by big dams, the better idea would have been to speed up forestation engendering more livelihood. This would have made immensely greater economic sense
- Another point highlighted by Justice Bhengra was underutilization of fund for forestation made available by the World Bank. It was demonstrated by a chart with 16 states mentioned therein. If you look at Andhra Pradesh, there is mention of 4/7 . 4 indicates the State's specific project and the number 7 indicates the inter-state projects. If you come down to the bottom, after Serial 16, you have 44; amongst 16 States, there are 44 state projects and about 119 inter state projects and the total number of projects are 163. I have not added the total value given in US Dollars as shown in 5th column. You can see some of the figures. If you look at U.P., it is 2643.9 dollars. The amount is big. There are 16 charts in which most of the projects related to education, health and other things. There was only one, I would say, related to forest obtained and that was in column (1)- Andhra Pradesh Community Forestry only one out of 163; that appears to me to be related to forest. Even in so many projects, the World Bank is tapping that resources If we look at Andhra Pradesh, it is a figure of 108 millions US dollars. If we are going to calculate the phenomenal

amount of money, the total comes to 1514. 79 crores. Most of the projects are for livelihood and very few for forest. Out of 163 project only one was for forest. So phenomenal amount of money is available. Soft loan you can get. All Over India, we are trying to get the World Bank money. And now I would come to the next page. It is Jharkhand Rural Livelihood & Natural Resource Management. Apparently, I think, it was the project that was discussed. Forest people should know better. Total project cost is 60 million dollars (US); commitment amount was 40 million dollars which one needs to calculate (in rupees) and the figure is rupees 250 crores. The status was that the project was dropped without any cogent reason. The question is why it was dropped. In the concluding portion, I say it is a mystery as to why this project seems to have been dropped, particularly when around 163 projects with massive WB assistance already proposed are going on. Finances are macro level finances are required and they need to be tapped into.

**Hon'ble Mr. Justice Dalip Singh,
Member, National Green Tribunal**

Hon'ble Mr. Justice Dalip Singh Member Green Tribunal opened the discussion with reference to Article 48A and Article 51A(g) of the Constitution of India. The problem with regard to the depletion of the environment and the natural resources was well understood and put down in the Constitution itself.

- Wild life, if we look at, the Constitution mandates compassion for all living creatures. Since 1972, we have the Wild Life Conservation (Protection) Act, but forest cover, which is the habitat for the wild life that is shrinking and quite rapidly. What was then thought of was



for every tree or forest cover areas that is reduced, you must have compensatory forests. Unfortunately, our experience shows that even despite there being substantial

amounts on account of the Campa fund, the fact remains that the areas which were depleted or deforested, they had their own peculiar characteristics in terms that it deals with climate.

- Forest attract rain, the regions were hilly. Moisture content in the forest, all rivers in our country are not snow fed, they are rainfed, which are not coming from the Himalayas. Rainfall is therefore of critical and crucial importance for large part of the country. The moisture from the rainfall gradually gets released through various small streams and springs allowing those small Nallahs to become tributaries and to come into the main rivers.
- Again here, the flash flood that occurs is a major issue. The natural disasters that occur on account of various climatic changes, they need to be taken into account. The amount that is required in the matter of relief and rehabilitation, what to talk of restoration in Uttarakhand, J & K, Assam, all these areas and many other areas, is huge. The drought hit areas of Maharashtra, Andhra, Telangana parts are also facing drought this year and several other regions in our country. If we look at the kind of expenditure that is there, question of development in disregard to environmental concern comes to fore.
- The index of economic growth like industrialization, development, GDP growth, income, budgetary allocations may all be offset by the investment required to restore environmental degradation and rehabilitation after natural disasters .
- Another point strongly made by Justice Singh was cumulative effect of projects. Normally the assessment and appraisals are made in respect of individual project that come before the committees for appraisal and clearances. The cumulative impact, which is required to be seen, is sometimes ignored. And therefore, when there are two projects, its OK, but when it comes to 25 or 30, whether it is the thermal Power Stations or whether there are the industries, the fallout when taken together cumulatively, needs to be considered and not merely on the basis of individual projects and their considerations.

**Sri P. R. Sinha,
Country Director, IUCN**

Sri P.R. Sinha, Country Director, IUCN, gave presentation on the core issues. Mr Sinha lit lamp of four ideas : The concept of natural capital, the strategy of what we call avoidance, mitigation, and offset which is adopted for a economic development and the industrialization; the concept of no net loss or net positive gain which is being adopted by big multi-national companies these days, and then, nature based solutions.



- So, the concept of natural capital is big global movement these days and it flows from the idea that most of the companies if they are required to pay for services, the eco system services which they use and they do not pay, they will have to part with 41 cents for each dollar which they part (as per a study done by KGNP). So it is a sort of an invoicing for the future generations. And therefore, what has happened and you can see, when you browse the web, you will find natural capital coalition and that a large number of companies have joined that coalition. A Large number of financial institution, top financial institutions, are part of coalition and the companies are part of that coalition. Some conservational organization are also part of the coalition including my own organ and my organization IUCN and this coalition is asking the members to pledge that you will not destroy the natural capital, because it is your base; it is the capital and if you erode the capital, then the growth will not be sustainable.
- Then the strategy of avoidance , mitigation and offset. This is core of economic development in terms of bio diversity and wild life. This principle of avoidance, mitigation and offset is being followed by big companies these days. Multinationals, the companies which are operating in this country , - I will not name the companies,

but they are following. What they do when in the board meeting, when they take decision they look at the information system which is available and one of the significant information system available is called integrated bio-diversity system tool, and you click one point where you want to invest, then it generates data. It gives information as to where is the national park, sanctuary? Where is heritage area? Which species are found there? You generate entire report on that. So, what they do, if they find that their investment is falling in the vicinity or inside biodiversity rich area they try to work out an avoidance strategy, and if suppose it is just not possible because of political, social and economic consideration, then they go for mitigation plan, and you will be surprised to know that even in this country, and in Madhya Pradesh itself, one company is operating, they have not started working there. But they have already invested a crore of rupees in vulture conservation. So these are the things that first mitigate and then you try to roll out your activity and suppose that even that mitigation is not possible, then they go for what they call offset.

- In offset principle the companies write in their chart that they will go for no net loss strategy. No net loss is that if you add up all their activities, and look into all these strategy which they have put in place, then, the loss of biodiversity is there and there are some companies who say that by following the principle of mitigation and offset, they we will go for net positive impact, and they are bold enough to put it on their website that they are sustainable ; that their strategy is for net positive impact. It is very interesting to note that I will just give one example of ALM, the Cheerline, about forty million mills are served by them. They clearly say that they will not source anything from any unsustainable sources. So what is happening in global market, most of the places people are not going to pay for the product which is coming from unsustainable sources. So from that prospective, it is relevant for these countries as we are growing that if we try to do things, and try to bring out products, which are coming from unsustainable sources, it will not sell in the global market.

People will not buy it like products from child labour and other things. All those signatories who have signed what we call it equator principle are about 75 banks .

- Within our own country, within Jharkhand also, there are progressive companies, and mining companies, who are going for bio- diversity measure plan and it is beyond compliance and Cement Industries also in India, there is one initiative called cement sustainability initiative. 70% of the cement which the countries are producing, those companies have joined CSI initiative. It is initiative of the World Business Council for Sustainability Development which is a conglomeration of about 200 top business figures across the world. And they have mainstream, the natural capital accounting system in their own decision.
- Lastly, the nature based solution. General feeling is that we cannot have development without destroying biodiversity or natural capital. But there are large number of examples where nature based solutions have worked and I will just give one example, a very famous example, most of you know, the Catsel's delivery system which supplies water to the New York city. Very simple thing is that if you go for water filtration plant, it will cause 6 to 10 billion and it will require 110 million and well expenditure. If you go to improve the watershed, which was under impact of human and cattle, then the cost will be 100 million a year and they went for that and this is the largest system where unfiltered water is supplied and there are about 20 cities across the world, where water sheds are supplying water. In India also, in Simla water supply, and in Mumbai water supply 10% of it coming from national park. If you go for that there is hardly water crisis there because of the streams having been recharged because of protection and China also is going in a big way. They have launched projects where in big cities water supply is going to be based on watersheds and perhaps it is very very relevant for this State that we should link the water shed conservation to water supply and one of the big companies, global company Danno, is actually helping China and

- lastly, I would say that China is very good example from which we can learn; they have destroyed their wild life and bio diversity, but they, in the 18th meeting of CPC, have decided that they will go for what they call eco civilization, and true component of eco civilization is that they will draw red lines like our own eco sensitive zone and they will keep on investing till the eco system suddenly says, come back in that particular land. That is one strategy and another strategy they have adopted is gross eco-system product and they are already working in scientific institutions. So it is GDP minus – GEP and they try to make investment to make GDP almost equal GEP.
- In India also, two cumulative assessment reports are there done by wild life institute of India and one was on Bhagriathi Alaknanda and another was on Chambal, and it will be worth visiting those reports to see how we can take much better if you go for cumulative assessment of projects.

**Dr. Ravindra Kumar Sinha,
University Professor & Head of Zoology Dept, Patna University, Patna**

Dr. Ravindra Kumar Sinha shared his experience and concern with respect to conservation of Gangatic dolphins,.

- There are large number of aquatic wild life, wild animal; in our eco aquatic system. India has not done much on the marine wild life especially the whales, dolphins tortoises. No doubt, if there are forests; we have water and when we have water, then rivers will survive and rivers will survive then only aquatic wild life can survive in rivers.



- What we are finding is that due to loss of forest in Himalayas or in Jharkhand, the crisis of water is there. He further laid stress on the native wisdom. But unfortunately, in our system, we never consult local populace whenever we go for any development.

Whether it is Kosi area or any dam or any other development, seldom we consult the local people and just in the name of public hearing, some formalities are completed, but no serious consultation at least to document their knowledge, their wisdom. Our action must start from somewhere and since my experiences are working with the common man, the fisherman, the farmers in the field, I would like to share those experiences.

- Rain water harvesting must be done through reservoir, not dam on the river. Reservoirs along the river, may be, in basin of the river, and that can tap water that can store water which can also recharge the river. We had a long history of “ahaar time system”, especially in South Bihar and also in Jharkhand. But I do not know, probably, the younger generation might not even have heard of this word. Ahar was to harvest rain water.
- We should focus on the aquatic wild life, like our dolphins, gharials, turtles and tortoise, because they are playing very important role and the support species supporting system that invertebrates.
- When we constructed Farakka, it was commissioned in 1975. Just after 20 years, Farakka is almost dead. 72 feet bondage area and Farakka is completely filled; now, we have 3 kms long sand bar, 3 kms long and 400 meter wide sand bar at Farakka. So, what happened? We are carrying a lot of silt. Kosi is the second highest carrier of silt. So the dams should not come on river as a channel through which water is flowing, it is a dynamic system and that dynamic system is mainly because biota is there and those biota are playing some important role to make the river clean and also to maintain the eco system balanced. So to maintain eco system balanced, yes, we need bio diversity, we need other species, we need wild life.

Sri M. P. Singh,
Director, Forest Education,
Ministry of Environment, Forest and Climate Change, Dehradun

Sri M.P. Singh, Director, Forest Education, Ministry of Environment, Forest and Climate Change, Dehradun, made a presentation on Forest transition, forest management and climate change in two parts.



- Talking about the forest situation, we need to know how is the condition of our forest. So, what is being done at present, is the Forest Survey of India looking at the forest situation in terms of forest cover and the forest density and there are certain information regarding the growing stock also. But till now, with the change in the forest management from sustainable forest management to the multiple functions of the forest, we need to look at the forest situation from the point of view of the eco-system services also.
- We had National working Plan Code in 2004. But now we have the new working Plan Code for 2014 where all these aspects of the eco system good services have been integrated. So, this is regarding the comparative figure of the forest cover. We have around more than 20% forest cover in the country as compared to world level, we are below 30% i.e. the average of the world level. But still we have our policy; in the 1988 policy, we kept our objective that we will achieve 1/3rd of the forest cover.
- The first study came in 1992 by Methor for Sweden. Then afterwards many countries including India were covered. There were some explanations also why this is happening, how the countries are undergoing from de-forestation to the re-forestation, what are the theory of pathways? So general theory for the developed countries in Europe, it was basically based on the principle that for economic

development, the environmental degradation will initially increase and increase, and then it will decrease when the countries attain economic development at certain stage. This also applied to countries like China and Vietnam. The reason was cited that it is because of forest scarcity, that is because of the scarcity of forest products, the countries have undertaken, a large scale plantation and then in the case of Bhutan, it was the State policy pathway. It was with intervention of the State that we started to preserve forest. In the case of Bhutan it was culturally integrated where the value of forest was integrated into their culture system. So, that was a State policy was very much responsible for the pathway of recovery of the forest. So, because of the global impact of the global assistance also, they have gone for the deforestation to reforestation pathway and the most important one is the small holder of land.

- Jharkhand can be one of the State in the country where we can really go for this pathway. This is called forest transition; so we have moved from the deforestation to the re-forestation.
- Because of increase in the productivity from the agriculture because of the green revolution and that is why there was less pressure on the forest land to be diverted for the agriculture purpose. This is the socio-economic stages of the development.
- If we see the forest density in distinction from the forest cover point of view then we see that lots of the dense forest are getting converted into open forest. That is because of the pressure and pressure is in the demand and supply and this is all because of these aspect of forest degradation. So continuous degradation is also happening. We are talking of deforestation which is a challenge especially in the context of the climate change.
- The answer is that we have integrated all the aspects of the climate change biolytic conservation and with the our national working plan code 2014. So we have changed our whole of the sampling design in such a way that we can see we can generate the historic data and we can go for the assessment of the climate change

at the country level. We have a pilot project with the help of the forest plus which is looking at the things.

- Coming to the Jharkhand case, what is more important is that we have almost 34% of the area which is fallow land, unproductive land in Jharkhand and we have almost 30% land under the forest and we are not doing any production from the forest. So almost in 60% of the area there is no economic activity. In Jharkhand we really have not so much potential for the carbon storage and if we calculate our estimate of that we will require Rs.2000 per tonne with ten years rotations and if we go for our whole of the states, we will be requiring around 60-65 crores only to take and we can have a Green Jharkhand Climate Fund kind of things, with the support from the emitters. This is the problem of the State of Jharkhand that we are very badly placed as compared to the other states. So if we can make contributions from the polluters, then we can have a Green Jharkhand Climate Fund and we can go for the other fallow lands to make them productive like this. So we require to do the forestry also in the forest. that is the conclusion how we can gain the economic activities.
- **Mr. B. S. Sajwan, Expert Member, National Green Tribunal**, gave a general preview of para-dynamic changes that have happened in forestry scenario within the country and globally:
 - Now, globally, we have 400 billion hectares of forests. India has about 1/10th of that and about that accounts for about 30% of the geography,, five countries, Russia, Canada, USA, China, and Brazil account for about half of the world forest resources and 75% of the fresh water, that we drink, mostly in developing countries comes from the forest eco-system. It is in this context that forest becomes extremely important for not only sustaining lives, but also for overall context of environment. What happens globally to the forest, affects us. Climate change is a global phenomenon but the impacts are felt at local level and all

the actions that we take at local level also have global impact though it is not immediately perceptible.

- During the last few years, the average forest loss was 18% which is about 800 million forests are being lost, largely due to forest fire. But the good thing is that most of these forests that are lost in the geographical area, - Canada Russia, Hungary - , get also recuperated because the forests are able to regenerate in those areas. But the major area of concern is the tropical countries of which we are the part. Amazon basin which alone accounts for some 800 million hectares of forests, three times the geographical area of this country, those forests are being cleared in a big way. Forests in Congo, forest in Indonesia, are the areas which are tropical countries where not only they house large amount of bio-diversity, but also lot of people for their livelihood depend on the forests. Alarming thing is that almost 100 species of animals in plants are being lost every day.
- Now this is something which is extremely important, because the deforestation that is happening across the globe, accounts for something like 15% of the global emission. If this is kind of trend that goes on, we are heading for serious trouble in future.
- Another major areas of concern which generally gets ignored, is that about 15-20% of the forests are only primary forests and the rest are all secondary forests. When we say secondary forest, it means these forests have not got recuperative or that have been re-planted and they are part of the in-session programme. The question, therefore, is whether the secondary forests are able to provide the kind of ecological services which we have talked about earlier, whether they are able to provide those kinds of services is something which is seriously in question.
- There are actually three phases in forestry. Pre 80's before the Forest Conservation Act 1980 which is a landmark Act. This is a very brief Act, very

small Act, but it is very very important and it has made significant contribution. Earlier we had a forest policy, which only said that forests are meant for revenue generation. Britishers brought forest all under Crown control. Subsequently, in 1952 forest policy brought them under Government control. The Departments of Forest were called revenue departments and their focus was different. I think revenue approach to forest was primarily driven from the policies that we had, the national concern we had just after acquired independence, we needed infrastructures, we needed industry.

- Britishers destroyed forests because they wanted to lay down railways; 50,000 kms of railway that India has, every km requires something like 1000 sleepers they had to replace every 10-12 years. So these are the kind of concern. At that point of time. 1952 forest policy virtually continued and that also on top of it, there were requirements of supplying food to the people, so, all the lands that was brought under agriculture largely subsistent agriculture, was at the cost of the forest land. Therefore, order of destruction was something of 4 lakhs hectares per year prior upto 1980. Of course, 42nd Amendment to the Constitution brought a lot of changes and forest was brought under concurrent list.
- Then during the period 1980 to 1996 a mechanism was evolved that Forest Survey of India would be required to evaluate the forest cover in what is happening. In the national forest policy we changed the focus, rather than revenue, it said eco system services is going to be the focus of our national forest policy.
- In the UN convention environment, 192 nations were signatories to that convention. They said, we must recognize that forests have multi-functionality and they cannot be limited to one function. We cannot compartmentalize the role of forests. So multi- functionality was realized and we adopted Forestry

principles in the 1992. Conference and it also recognized/agreed that without these eco system services, the life on earth without forests will be impossible.

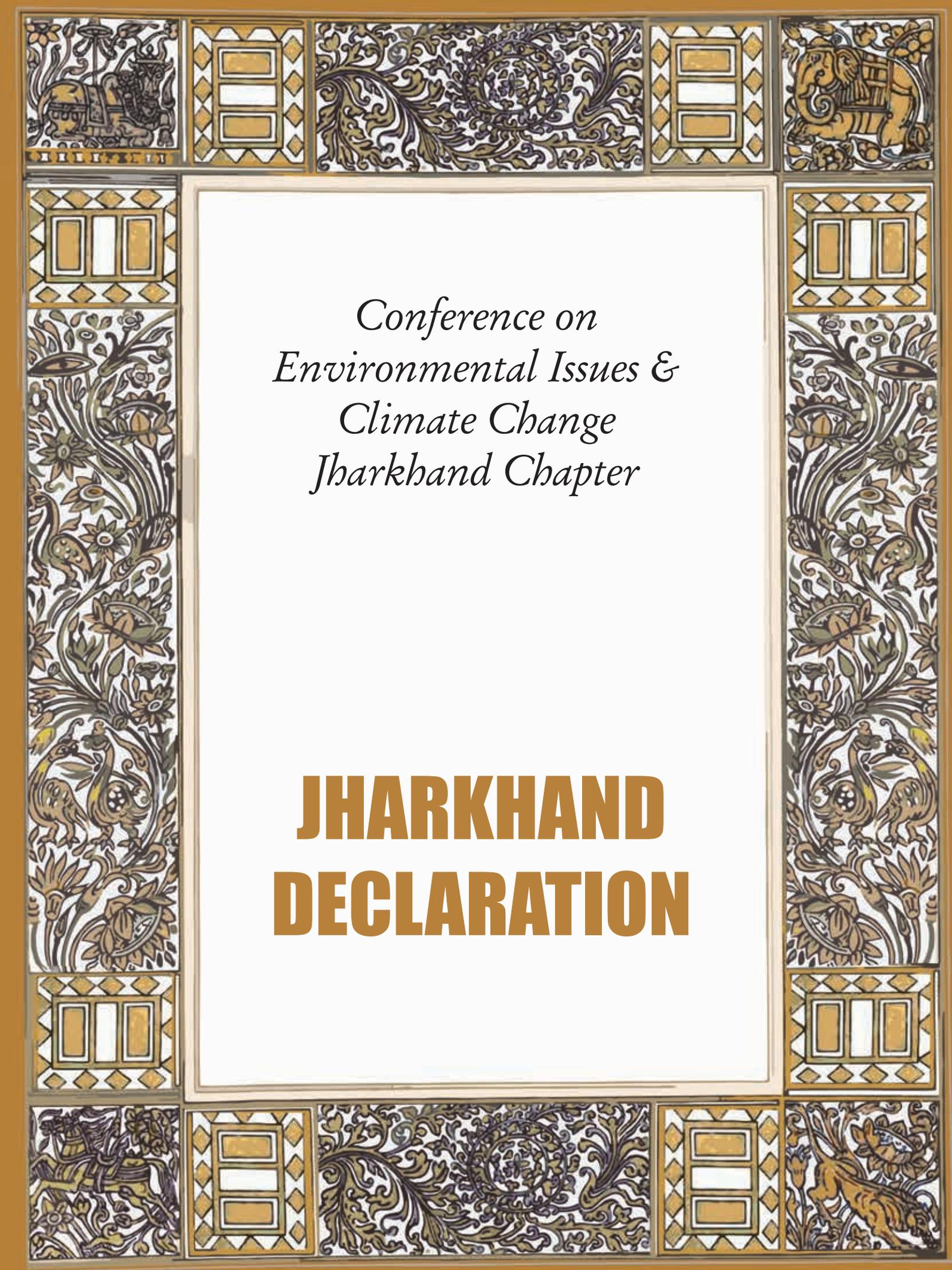
- Apart from environmental, the economic dividends arising out of Forests was highlighted in the presentation of Dr. Sijwan. There are more than 100 studies which suggest that per hectare forests the value of eco system provided is of the order 600 - 6000 dollars. There are studies done by Indian Institutions and based on formal studies, we say that the State like Himachal provides eco-system services to the extent of 1 lakh crore per year, whereas the revenue from the forests was less than 1000 crores. So, these are the kinds of eco system services we were talking about; they are not reflected in our national planning and in our GDP exercise, but they are relevant, because being environmental they are relevant to the societies.
- The net present value of the forest which the Hon'ble Supreme Court introduced as a concept is the eco-system services which the forest is providing at a particular point of time; net present value is derived, over a period of 50 years. When we say that these are benefits which your forest would give you, that discounted at a particular rate, because society is prepared to discount the benefit that the forest draws at a lower rate, let us say 3-4%. This is also the time we are prepared to wait that the forestry will give benefit not in the next year, but 30 years 40 years down the line; the net present value is something that we have to compensate.
- But the question is whether what we do as compensatory forestry is able to provide the ecosystem services even after it is fully reforested?
- There are a large number of definitions of forest and there is one definition given by FAO which is one given by the Forest Survey of India and also there are definitions which Hon'ble Supreme Court has given. The point is that there are lot of problems There are dry forest and then there are tropical ever green forest; former hardly looks like a forest. It is thorny area while

the later is tropical ever green forest; ecologically or biologically speaking, both have lot of dissimilarity. This is one of the major challenges, as to how to define a forest because the amount of diversity in the forest in the country is some thing which is phenomenal. It cannot be in one definition for all these States across the country. Although, the Hon'ble Supreme Court had also tried to evolve mechanism saying you constitute the experts committee to mitigate the problem, but whether they will able to do is something which is an area of concern. It is not only to do with the ecological and biological status, it is also to do it legally.

- Now, let us say in the North East it accounts for 25% of the forest cover of country, there are customary laws. People do shifting cultivation jhuming, now somebody who is doing jhuming, the land which belongs to the forest area belongs to him, I cannot suddenly say that Forest Conservation Act applies here, because for him it is a question of livelihood; so what I am trying to say there are customary laws and there are land laws which vary from state to state and, therefore one will have to look at those; one will have to look at the ecological diversity bio-dimension of what constitutes forest before one arrives at a definition. Net present value I have already mentioned that forest provides you ecological bio-diversity system over several years. Those services whether can be compensated by compensatory afforestation is something which is a matter of debate.
- If your replace “shaal” growing in Jharkhand by tea plant, or say by Eucalyptus plantation, even after they mature, can they provide kinds of eco-system services which the 'shaal' forest was providing for the people and for the environment? That is an area which is still a matter of concern.
- If I want to have working plan we must have a plan for for conservation of forest, it needs to be approved by the Central Government. Whether the Central Government has the kind of wherewithals and whether as individual

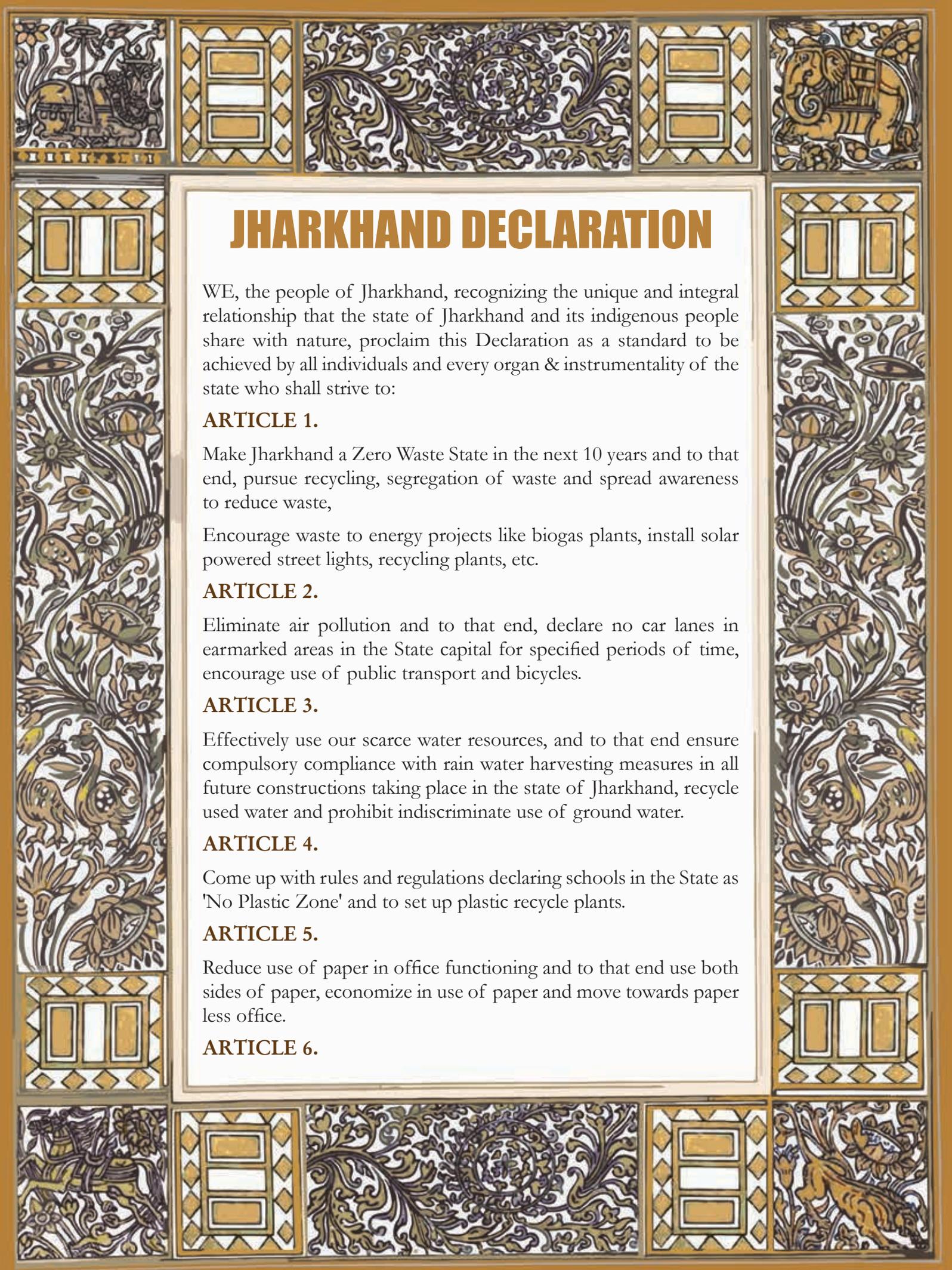
I can draw a working plan is something which is the question mark. So the point is if we want to promote conservation of forest, if we want to improve more forest bio-diversity, I must encourage people to plant their forests. We can't have laws which say don't do it; at the same time, achieve conservation. Conservation cannot be achieved by enforcing laws or bringing more stricter laws. We have to see what is the ground reality, for which people depend on forest, what is it that they want and therefore, the law has to take the reality that exists on the ground, the diversity that exists in our country in terms of the people who are dependent on forest has to be taken into account.





*Conference on
Environmental Issues &
Climate Change
Jharkhand Chapter*

**JHARKHAND
DECLARATION**



JHARKHAND DECLARATION

WE, the people of Jharkhand, recognizing the unique and integral relationship that the state of Jharkhand and its indigenous people share with nature, proclaim this Declaration as a standard to be achieved by all individuals and every organ & instrumentality of the state who shall strive to:

ARTICLE 1.

Make Jharkhand a Zero Waste State in the next 10 years and to that end, pursue recycling, segregation of waste and spread awareness to reduce waste,

Encourage waste to energy projects like biogas plants, install solar powered street lights, recycling plants, etc.

ARTICLE 2.

Eliminate air pollution and to that end, declare no car lanes in earmarked areas in the State capital for specified periods of time, encourage use of public transport and bicycles.

ARTICLE 3.

Effectively use our scarce water resources, and to that end ensure compulsory compliance with rain water harvesting measures in all future constructions taking place in the state of Jharkhand, recycle used water and prohibit indiscriminate use of ground water.

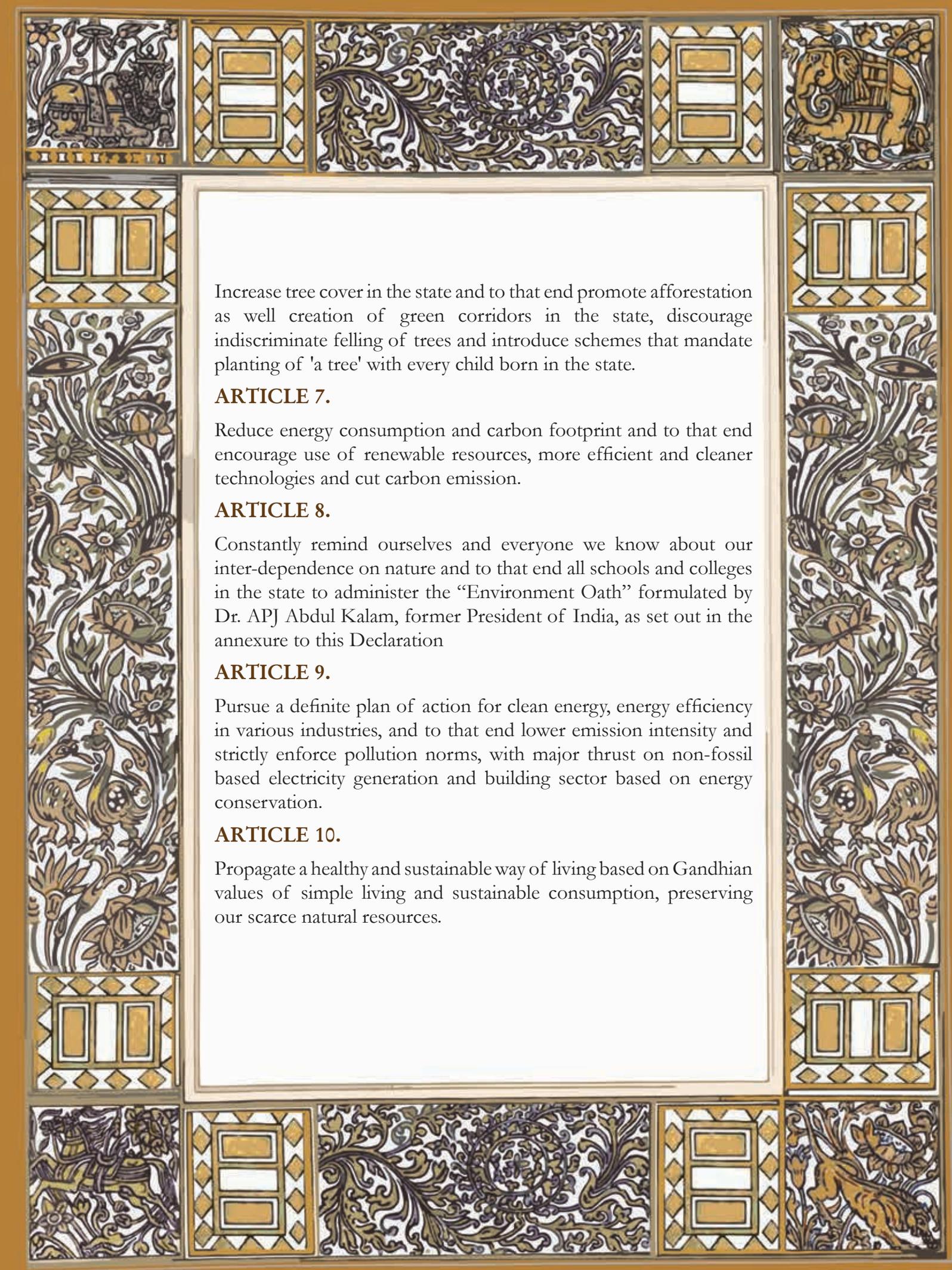
ARTICLE 4.

Come up with rules and regulations declaring schools in the State as 'No Plastic Zone' and to set up plastic recycle plants.

ARTICLE 5.

Reduce use of paper in office functioning and to that end use both sides of paper, economize in use of paper and move towards paper less office.

ARTICLE 6.

The page is framed by a decorative border. The top and bottom borders consist of a repeating pattern of four panels: a panel with a bull, a panel with a window-like motif, a panel with a dense floral pattern, and another panel with a window-like motif. The left and right borders consist of a repeating pattern of three panels: a panel with a window-like motif, a panel with a floral pattern, and a panel with a peacock. The central area is a white rectangle containing text.

Increase tree cover in the state and to that end promote afforestation as well creation of green corridors in the state, discourage indiscriminate felling of trees and introduce schemes that mandate planting of 'a tree' with every child born in the state.

ARTICLE 7.

Reduce energy consumption and carbon footprint and to that end encourage use of renewable resources, more efficient and cleaner technologies and cut carbon emission.

ARTICLE 8.

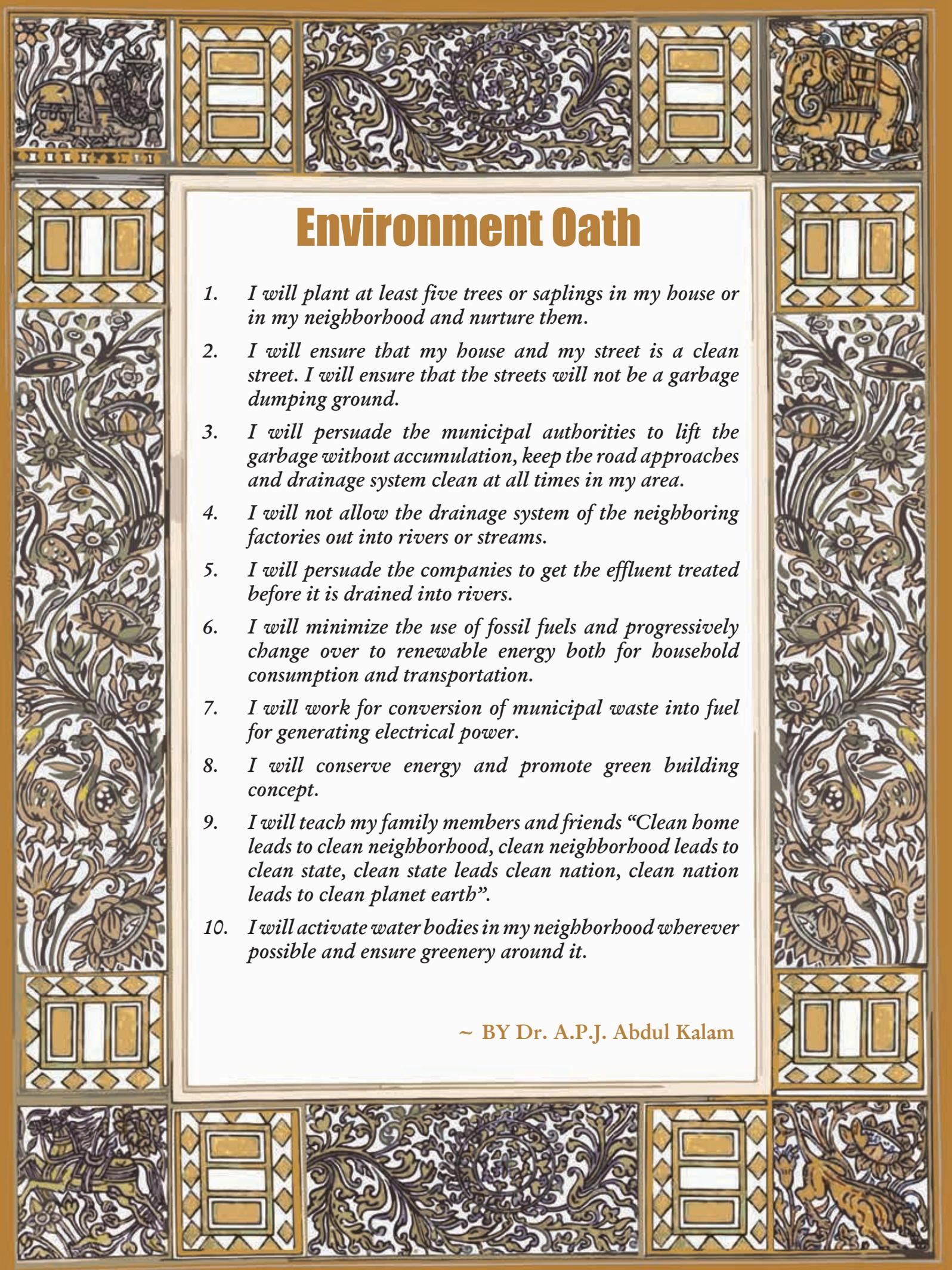
Constantly remind ourselves and everyone we know about our inter-dependence on nature and to that end all schools and colleges in the state to administer the “Environment Oath” formulated by Dr. APJ Abdul Kalam, former President of India, as set out in the annexure to this Declaration

ARTICLE 9.

Pursue a definite plan of action for clean energy, energy efficiency in various industries, and to that end lower emission intensity and strictly enforce pollution norms, with major thrust on non-fossil based electricity generation and building sector based on energy conservation.

ARTICLE 10.

Propagate a healthy and sustainable way of living based on Gandhian values of simple living and sustainable consumption, preserving our scarce natural resources.



Environment Oath

1. *I will plant at least five trees or saplings in my house or in my neighborhood and nurture them.*
2. *I will ensure that my house and my street is a clean street. I will ensure that the streets will not be a garbage dumping ground.*
3. *I will persuade the municipal authorities to lift the garbage without accumulation, keep the road approaches and drainage system clean at all times in my area.*
4. *I will not allow the drainage system of the neighboring factories out into rivers or streams.*
5. *I will persuade the companies to get the effluent treated before it is drained into rivers.*
6. *I will minimize the use of fossil fuels and progressively change over to renewable energy both for household consumption and transportation.*
7. *I will work for conversion of municipal waste into fuel for generating electrical power.*
8. *I will conserve energy and promote green building concept.*
9. *I will teach my family members and friends "Clean home leads to clean neighborhood, clean neighborhood leads to clean state, clean state leads clean nation, clean nation leads to clean planet earth".*
10. *I will activate water bodies in my neighborhood wherever possible and ensure greenery around it.*

~ BY Dr. A.P.J. Abdul Kalam



**STEPS FORWARD
FROM THE CONFERENCE**



HIGH COURT OF JHARKHAND
 JUDICIAL ACADEMY
 NATIONAL GREEN TRIBUNAL
 DEPARTMENT OF FOREST, ENVIRONMENT & CLIMATE

Environmental Issues and Jharkhand

Chief Guest
Hon'ble Mr. Justice T
 Judge, Supreme Court

Hon'ble Mr. Justice Anil R. Dave
 Judge
 Supreme Court of India

Guests of Honour
Hon'ble Sri Raghuraj
 Chief Minister
 State of Jharkhand

Hon'ble Mr. Justice S **r Kumar**
 Chairperson
 National Green Tribunal

Hon'ble Justice Virendra
 Chief Justice
 High Court of Jharkhand
 Patna in Chief
 Jharkhand



JHARKHAND
JHARKHAND
TRIBUNAL &
CLIMATE CHANGE, GOVT. OF JHARKHAND



and Climate Change Chapter

S. Thakur
of India

Hon'ble Sri Prakash Javadekar
Minister of State, Environment,
Forest & Climate Change

Hon'ble Mr. R.R. Prasad
Judge, High Court of Jharkhand,
Justice in Charge, Patna Bench





DAMODAR

Sriharis

STEPS FORWARD FROM THE CONFERENCE

Although climate change is a global phenomenon but the impacts are felt at local level and all the actions that we take at local level also have global impact. Therefore, the conference in general proposes these steps forward :

- I.** The Central and the State Pollution Control Boards to set up Air Quality Index Stations at every important towns and cities. Both electronic and print media to publish Air Quality Index in the daily newspaper and other electronic media in the same manner it provides information on rainfall, humidity, sunrise and sunset on daily basis.
- II.** Environmental awareness: Need for environmental awareness was shared by the speakers in each of the session. In the Technical Session II on Urban and Bio-Medical Waste , a report was cited wherein it was found that not even 50% of the Hospital staffs were aware about Biomedical Waste (Handling and Management) Rule 1998.
- III.** Mode of spreading awareness to be by;
 - Publication of multilingual pamphlets on Environmental law and their dissemination by various agencies including DLSA at the district level.
 - Legal awareness camp on environmental issues.
 - At school level children above class V should be administered environmental oath as formulated by Dr. A.P.J. Abdul Kalam
 - Inclusion of subject of Environment and Climate Change in school curricula.
- IV.** Matters regarding compliance with environmental laws to be taken up by the Principal District Judge in the Monitoring cell meeting and the District pollution Control officer to be also made member of the committee .
- V.** Government to come up with proper amendments in Municipal Corporation Act for making provisions for segregation of different categories of urban wastes. Appropriate Acts to be also framed prescribing fine for non compliance with the rules and for littering public space.
- VI.** Every city and town to have a definite public space for landfills.
- VII.** Government to actively consider and moot proposal to set up recycling plant for Municipal solid waste, starting with Major cities of Jharkhand like Ranchi, Dhanbad, Jamshedpur and Deoghar.
- VIII.** All cities with more than ten lakh population to have a committed and properly fenced forest area of at least 50-100 acre, with water bodies for supplying water to urban house hold, so as to link watershed conservation to water supply. Adjoining forest area can be utilized by the citizenry for walking, jogging, yoga etc.

This is one of the nature based solution recommended by Sri P.R. Sinha Country Director IUCN in Technical Session III. A very famous example of this is Catsel's delivery system

which supplies water to New York City. China is also going a big way to link watershed conservation to water supply.

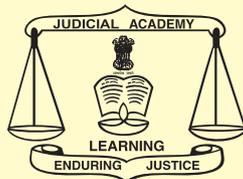
Govt to consider the viability of such project in the state of Jharkhand.

- IX.** Infrastructure to be made available by the state for the opening of the Circuit Bench of the National Green Tribunal at Ranchi.
- X.** Pollution Control Board to be strengthened so as to make it effective.
- XI.** To evolve nodal agencies both at the District and State level to enforce the Environmental Laws.
- XII.** Sri Rajiv Gauba Chief Secretary, Govt of Jharkhand while speaking in Technical Session I underlined the need for afforestation from the CAMPA funds in already notified forest areas, which are denuded of forest cover, instead of getting new land for afforestation under this scheme. Mr B.S.Sajwan , Expert member of the National Green Tribunal spoke about different categories of forests like tropical ever green forest on one hand and other dry forests which are notified forest areas but can hardly be called forest. Sri M.P. Singh, Director Education, Ministry of Environment, Forest and Climate Change also stated about fallow lands and no economic activity in 60% of the forest area in Jharkhand.

On the basis of the above, it can be strongly recommended to start afforestation drive in earmarked notified forest areas with denuded cover from CAMPA fund by involving schools, civil society, corporate and other such groups. The respective participating units can be given demarcated areas under its foster care exclusively for forestation. Modalities regarding watering of the plants and its protection can be worked out by the Forest Department in collaboration with the participating units.

- XIII.** Government to evolve specific strategy and frame necessary rules to check encroachment of riverbeds, water bodies and stop further construction upto fixed distance in its adjoining areas and to check discharge of untreated sewage in rivers, streams and water bodies.
- XIV.** All the industries must provide for Ombudsman within their own organization. That should be the “first port of call” for filing complaints against the companies. Once a complaint is filed it should be forwarded with specific recommendations and copies given to the complainant. Every industries requiring environmental clearance, and/or consent to operate from the Pollution Control Board should have an internal mechanism comprising environmental cell headed by a sufficiently high ranking Official/Director of the company to deal with all issues concerning environment & pollution related to the industry.





JUDICIAL ACADEMY JHARKHAND
Near Dhurwa Dam, Dhurwa, Ranchi-834004
Phone : 0651-2902833, 2902831, 2902834
Fax : 0651-2902834, 2902831
Email Id : judicialacademyjharkhand@yahoo.co.in
Website : www.jajharkhand.nic.in