

The ADB logo is a dark blue square with the letters 'ADB' in white, serif font. It is positioned at the top center of the page, above a green horizontal band. The background of the entire page is a low-angle photograph of a bamboo forest, with many tall, slender bamboo stalks reaching towards the sky, creating a sense of height and density. The lighting is bright, suggesting a sunny day, with some light filtering through the leaves at the top.

ADB

REGIONAL SYMPOSIUM ON FOREST AND PROTECTED AREAS LEGISLATION AND JURISPRUDENCE

Bridging Law and Science

27–29 April 2023
Kathmandu, Nepal

The ADB logo is a dark blue square with the letters 'ADB' in white, serif font. It is positioned at the top center of the page, above a green horizontal band. The background of the entire page is a low-angle photograph of a bamboo forest, with tall, slender bamboo stalks reaching towards a bright sky, creating a sense of height and natural beauty.

ADB

REGIONAL SYMPOSIUM ON FOREST AND PROTECTED AREAS LEGISLATION AND JURISPRUDENCE

Bridging Law and Science

27–29 April 2023
Kathmandu, Nepal

This post-symposium booklet was prepared by

Hyacinth E. Rafael-Antonio

*Knowledge Management Specialist (Consultant),
Strengthening Judicial Capacity Towards Sustainable Economic Development in Asia and the Pacific*

Martin Cosier

*Environment and Climate Change Law Specialist (Consultant),
Strengthening Judicial Capacity Towards Sustainable Economic Development in Asia and the Pacific*

and

Briony Eales

*Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant),
Strengthening Judicial Capacity Towards Sustainable Economic Development in Asia and the Pacific*

Photo on cover by kazuend/Unsplash.

Layout and typesetting services, as well as cover design, were done by **Jonathan Yamongan**.

ADB acknowledges the support of **Ma. Imelda Alcala**, Senior Project Coordinator (Consultant), Strengthening Judicial Capacity Towards Sustainable Economic Development in Asia and the Pacific; **Abigail P. Gotengco**, Associate Legal Operations Administrator; and **Rizalyn Ruth S. Aguantia**, Legal Operations Administrator (Consultant), for their logistical, technical, and administrative support, along with the **National Judicial Academy of Nepal** and **Supreme Court of Nepal** for hosting this symposium. **Joycelyn B. Lucena** provided technical support from Manila.

A snow capped mountain range as viewed from Shivapuri, Nepal.

Shivapuri is home to the Shivapuri Nagarjun National Park, the ninth national park in Nepal. Symposium participants visited Shivapuri Nagarjun National Park on day 3 of the Symposium. There are currently 20 Protected Areas in Nepal, including national parks, wildlife and hunting reserves, conservation areas, and buffer zones (photo by Chandan Chaurasia/Unsplash).

CONTENTS

Abbreviations v

1 Agenda 1

DAY 1 April 27, 2023

2 Opening Ceremony 11

3 Keynote Speeches 19

4 Plenary: Global Panorama of Forest and Protected Area Law, Science & Management 37

5 Regional Roundtable: Country Reports on Forest and Protected Areas Legislation and Jurisprudence 61

DAY 2 April 28, 2023

6 Workshops: Intersection of Forests and Protected Science and Law 73 Areas

7 Access to Justice in Forest and Protected Areas Matters 77

8 Community Interests in Forests and Protected Areas 89

9 Science and Innovations in Forest Protection and Management 105

DAY 3 April 29, 2023

10 Visit to Shivapuri Nagarjun National Park 123

11 Closing Ceremony 129

12 Other Materials 165

13 About the Speakers 227

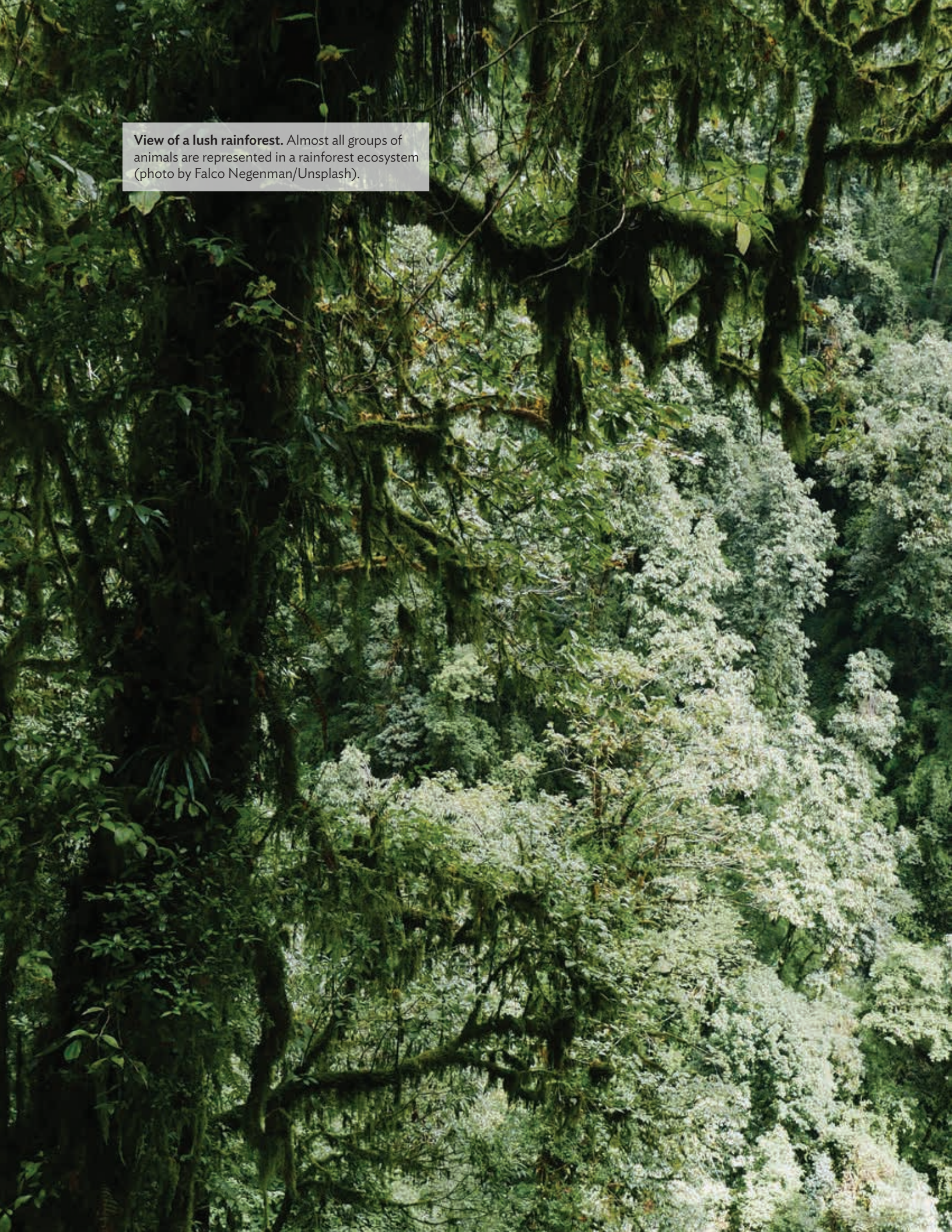


Ratargul Swamp Forest in Bangladesh. Ratargul is the only freshwater swamp forest in Bangladesh. Wetlands, such as swamps, are among the planet's most productive environments and are considered as "cradles of biological diversity" (photo by Ashique Anan Abir/Unsplash).

ABBREVIATIONS

ADB	Asian Development Bank
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CFC	chlorofluorocarbon
CLEP	Clinical Legal Education Program
COP	Conference of the Parties
DED	Deputy Executive Director
DNA	Deoxyribonucleic acid
EIA	Environmental Impact Assessment
FECOFUN	Federation of Community Forestry Users Nepal
GJIE	Global Judicial Institute on the Environment
GPS	global positioning system
IUCN	International Union for Conservation of Nature
LiDAR	Light Detection and Ranging
LPR	Law and Policy Reform Program
NBSAP	National Biodiversity Strategy and Action Plan
NDC	Nationally Determined Contribution
NGO	nongovernment organization
NJA	National Judicial Academy of Nepal
NSWLEC	New South Wales Land and Environment Court
REDD+	Reducing Emissions from Deforestation and forest Degradation+
SPOT	Satellite Pour l'Observation de la Terre
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WCEL	World Commission Environmental Law

View of a lush rainforest. Almost all groups of animals are represented in a rainforest ecosystem (photo by Falco Negenman/Unsplash).





AGENDA

27-29
APRIL 2023

**Regional Symposium on Forest and Protected Areas
Legislation and Jurisprudence:
Bridging Law and Science
Kathmandu Marriott Hotel, Nepal**

Co-organized by the Global Judicial Institute on the Environment, the World Commission on Environmental Law, the National Judicial Academy of Nepal, the Asian Development Bank, and the Judicial Academies of Bangladesh, India, Maldives, Pakistan, and Sri Lanka.

Scope

The Capacity Building Symposium on Forest and Protected Areas Legislation and Jurisprudence is aimed at the decision takers and change makers in the fields of judiciary, executive, and legislature to acquaint them with the intricacies of forest and protected areas laws while giving them a penumbral overview of the science behind the same.

The program involves various sessions to give an insight into the current developments in forest and protected areas laws with the basis of scientific knowledge currently available.

Objectives

- To assess, in a comparative perspective, the scope and developments of forest and protected areas legislation from Bangladesh, India, Maldives, Nepal, Pakistan, and Sri Lanka (Region).
- To identify key obstacles in the implementation of forest and protected areas legislation in the Region.
- To strengthen the judicial implementation of forest and protected areas legislation in the Region.
- To promote capacity building and information exchange in judicial decision making, enhancing the legal and the scientific knowledge of judges on forest and protected areas legislation.
- To promote natural environmental sciences in judicial decision making.
- To spearhead the discussion about a Model Forest Act for the Region and other parts of the world.

Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence: Bridging Law and Science

DAY 1

27 APRIL 2023

Agenda

Time (Nepal)	Activities	Facilitators / Presenters
Opening Ceremony		
<i>Welcome Remarks</i>		
8:30am – 8:45am	Welcome Remarks	Justice Baidya Nath Upadhyay Executive Director, National Judicial Academy of Nepal (NJA)
	ADB's Partnership in Nepal	Arnaud Heckmann, Principal Portfolio Management Specialist (Head), Nepal Resident Mission, Asian Development Bank (ADB)
	Opening Remarks	Justice Antonio Herman Benjamin, President, National High Court of Brazil (STJ), President, Global Judicial Institute of the Environment (GJIE), and Chair Emeritus, International Union for Conservation of Nature (IUCN) World Commission on Environmental Law (WCEL)
<i>Keynote Speeches</i>		
8:45am – 9:30am	Keynote Speech: Environmental Jurisprudence in Nepal and the Importance of Regional Judicial Networks	Justice Sapana Pradhan Malla, Supreme Court of Nepal
	Keynote Speech: Why Forests and Protected Areas Matter for Judiciaries Worldwide	Justice Antonio Herman Benjamin, President, National High Court of Brazil (STJ), President, GJIE, and Chair Emeritus, IUCN WCEL
	Inauguration Speech	Acting Chief Justice Hari Krishna Karki, Supreme Court of Nepal
	Group Photo	All participants
9:30am – 9:45am	<i>Refreshment Break</i>	

DAY 1
27 APRIL 2023

**Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence:
Bridging Law and Science**

Time (Nepal)	Activities	Facilitators / Presenters
Plenary: Global Panorama of Forest & Protected Area Law, Science & Management		
9:45am – 12:00pm	Symposium Objectives	Christina Pak, Principal Counsel and Team Leader, Law and Policy Reform, Asian Development Bank (ADB)
	Forests and the Climate Crisis	Christina Voigt, Professor, Oslo University School of Law; Chair, IUCN WCEL [virtual]
	The Science Behind Forest Protection	Bill Maynard, Forestry Practitioner
	The Contribution of Public Interest Litigation to Forest Conservation and Protected Area Management	Prakash Mani Sharma, Senior Advocate; Co-Founder and Former Chairman, Forum for Protection of Public Interest (Pro Public)
	Building Bridges in Legal and Policy Frameworks	Briony Eales, Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant), ADB
12:00pm – 2:00pm	<i>Lunch Break</i>	
Regional Roundtable: Country Reports on Forest and Protected Areas Legislation and Jurisprudence		
2:00pm–3:15pm	Overview of Regional Roundtable	Alexander Hinrichs, Head of Asia Regional Office, European Forest Institute (EFI)
	Emerging Trends in the Region: A Summary of the Country Reports (Nepal, Bangladesh, India, Maldives, Pakistan, Sri Lanka)	Eeshan Chaturvedi, Advisor, Global Judicial Institute on the Environment
	Facilitated Panel Discussion and Q&A on Country Reports	Facilitator: Alexander Hinrichs, Head of Asia Regional Office, EFI, and Nicholas Bryner, Associate Professor, Louisiana State University (LSU) and Special Advisor, GJIE Panelists: Judicial representatives
3:15pm – 3:30pm	<i>Refreshment Break</i>	
3:30pm – 5:30pm	Facilitated Panel Discussion of Recent Cases	Facilitator: Justice Antonio Herman Benjamin, President, National High Court of Brazil (STJ) and Briony Eales, Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant), ADB Panelists: Judicial representatives
5:30pm	<i>Close of Day 1</i>	

Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence: Bridging Law and Science

DAY 2

28 APRIL 2023

Time (Nepal)	Activities	Facilitators / Presenters
Workshops: Intersection of Forests and Protected Areas Science and Law		
8:30am–8:45am	Recap of Day 1 and Scene Setting for Workshop Sessions on Day 2	Henry Cornwell, Counsel, ADB
Access to Justice in Forest and Protected Areas Matters		
8:45am–10:15am	Engaging with Court Systems: External Perceptions and Experiences Court User Experiences – facilitated panel discussion involving perspectives of: <ul style="list-style-type: none"> Government Investigator, Enforcement Agency or Expert Witness Environmental Lawyer Community Member or NGO Representative 	Alexander Hinrichs, Head of Asia Regional Office, EFI Facilitators: Harj Narulla, Barrister, and Christina Pak, Principal Counsel & Team Leader, Law and Policy Reform, ADB Panelists: <ul style="list-style-type: none"> Padam Bahadur Shrestha, Advocate; President, Environmental Law Society, Nepal Rupert Stuart-Smith, Research Associate in Climate Science and the Law, Oxford Sustainable Law Programme [virtual] Shibani Ghosh, Lawyer Alexander Hinrichs, Head of Asia Regional Office, EFI
10:15am–10:30am	<i>Refreshment Break</i>	
Community Interests in Forests and Protected Areas		
10:30am–12:00pm	Supreme Court of the Philippines and Community Law Clinics Community Consultation and Rights to Forests in Nepal Forest Governance and Community Engagement in Nepal Q&A with Presenters	Justice Maria Filomena D. Singh, Supreme Court of the Philippines Bharati Kumari Pathak, Chairperson, Federation of Community Forestry Users Nepal Yam Malla, Forest Governance Consultant Facilitator: Martin Cosier, Environment and Climate Change Law Specialist (Consultant), ADB All participants
12:00pm – 2:00pm	<i>Lunch Break</i>	

DAY 2

28 APRIL 2023

Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence: Bridging Law and Science

Time (Nepal)	Activities	Facilitators / Presenters
Science and Innovations in Forest Protection and Management		
2:00pm–3:30pm	<p>Science and Technology: Opportunities for Forest Management</p> <hr/> <p>Science and Technology Innovations: Implications for Building Cases and Gathering Evidence: 5-minute elevator pitches on innovative tools for forest management:</p> <ul style="list-style-type: none"> • Bio-acoustic monitoring • DNA mapping of forests • Real-time, global datasets of forest cover and loss <hr/> <p>Managing Satellite and Other Data Evidence</p> <hr/> <p>Group Discussion: Reflections for Judicial Consideration of Forest Matters</p>	<p>Bill Maynard, Forestry Practitioner</p> <hr/> <p>Videos from:</p> <ul style="list-style-type: none"> • Rainforest Connection • Double Helix • Global Forest Watch, World Resources Institute • Nepal Flying Labs <hr/> <p>Justice Rachel Pepper, Land and Environment Court of New South Wales [virtual]</p> <hr/> <p>Facilitators: Justice Antonio Herman Benjamin, President, National High Court of Brazil (STJ) & Briony Eales, Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant), ADB All participants</p>
3:15pm – 3:30pm	<i>Refreshment Break</i>	
Judicial Remedies & Implementation		
3:30pm – 5:30pm	<p>Facilitated Panel Discussion, including reflections on the Day 2 sessions, covering:</p> <ul style="list-style-type: none"> • restoration • civil liabilities • administrative and criminal penalties 	<p>Facilitators: Justice Antonio Herman Benjamin, President, National High Court of Brazil (STJ) & Briony Eales, Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant), ADB</p> <p>Panelists:</p> <ul style="list-style-type: none"> • Justice Ananda Mohan Bhattarai, Supreme Court of Nepal • Justice Mansoor Ali Shah, Supreme Court of Pakistan • Justice Maria Filomena D. Singh, Supreme Court of the Philippines • Alexander Hinrichs, Head of Asia Regional Office, EFI
5:30pm – 5:45pm	Introduction to Shivapuri Nagarjun National Park and Briefing for Site Visit	Shivapuri Park Warden & Martin Cosier, Environment and Climate Change Law Specialist (Consultant), ADB
5:45pm	<i>Close of Day 2</i>	

Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence: Bridging Law and Science

DAY 3

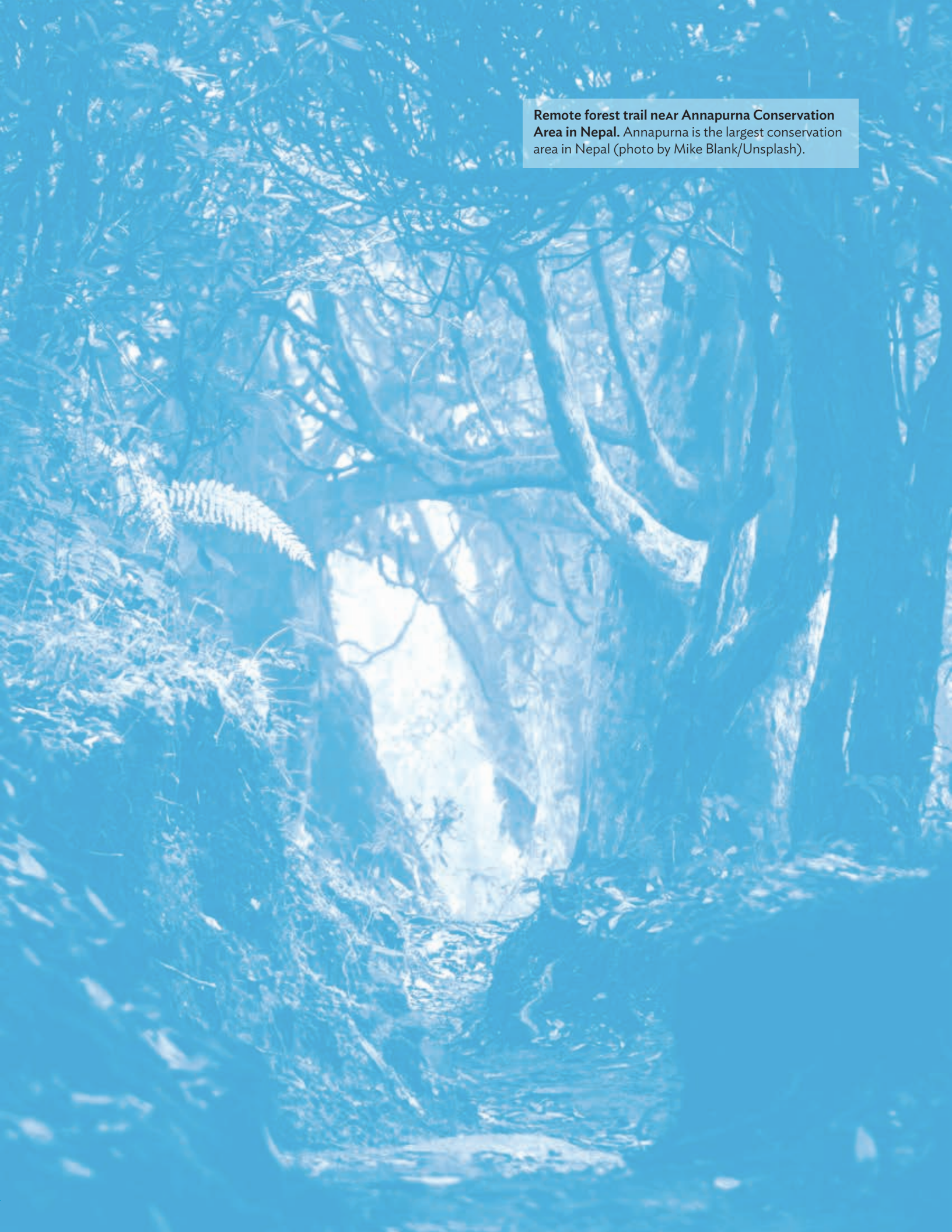
29 APRIL 2023

Time (Nepal)	Activities	Facilitators / Presenters
Site Visit		
7:00am	Buses depart Marriott Hotel for site visit	All participants
7:30am – 12:00pm	Welcome Remarks	Lt. Col. Rabi, K.C., Commanding Officer, Shree Bhawanidal Battalion, Nepali Army Justice Ananda Mohan Bhattarai, Supreme Court of Nepal Justice Antonio Herman Benjamin, President, National High Court of Brazil (STJ), President, GJIE, and Chair Emeritus, IUCN WCEL
	Guided walk in to discuss: <ul style="list-style-type: none"> Context for forest law and governance Logistics and practicalities in forest management Community roles in forest management Strategic and tactical planning for enforcement 	Guides: Nepal Department of Forests and Soil Conservation, Bill Maynard, Forestry Practitioner, & Alex Hinrichs, Head of Asia Regional Office, EFI
12:00pm	Buses return to Marriott Hotel	All participants
12:30pm – 2:00pm	Lunch Break	
Closing Ceremony		
4:30pm – 5:00pm	Closing Remarks	Justice Antonio Herman Benjamin, President, National High Court of Brazil (STJ), President, GJIE, and Chair Emeritus, IUCN WCEL Briony Eales, Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant), ADB Deputy Executive Director Kedar Paudel, National Judicial Academy of Nepal Justice Yahya Afridi, Supreme Court of Pakistan Justice Yasantha D. Kodagoda, P.C., Supreme Court of Sri Lanka.


DAY 3
29 APRIL 2023

Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence:
Bridging Law and Science

Time (Nepal)	Activities	Facilitators / Presenters
		Justice M. M. Sundresh, Supreme Court of India
		Justice Md. Nuruzzaman, Supreme Court of Bangladesh
		Justice Dheebanaz Fahmy, High Court of the Maldives
	Closing Keynote	Justice Dr. Ananda Mohan Bhattarai, Supreme Court of Nepal
	Closing Remarks	Christina Pak, Principal Counsel & Team Leader, Law and Policy Reform, Asian Development Bank

A blue-tinted photograph of a forest trail. The path is narrow and appears to be made of dirt or small stones, leading through a dense forest. Large, thick tree trunks are prominent on both sides, with their branches reaching over the path. The ground is covered with ferns and other forest floor vegetation. The overall atmosphere is serene and natural.

Remote forest trail near Annapurna Conservation Area in Nepal. Annapurna is the largest conservation area in Nepal (photo by Mike Blank/Unsplash).



Forest trail in the Shivapuri Nagarjun National Park.

The national park is home to the Himalayan black bear, leopard, jungle cat, and rhesus monkey, as well as to 177 species of birds, including at least 9 threatened species, 102 species of butterflies with a number of rare and endangered species, and 129 species of mushroom (photo by Sujitabh Chaudhary/Unsplash).



2

DAY 1
**OPENING
CEREMONY**

Introduction by the Master of Ceremonies



JUDGE KEDAR PAUDEL
Deputy Executive Director,
National Judicial Academy of Nepal

The Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence: Bridging Law and Science began with the opening ceremony. The master of ceremonies for the symposium was Hon. Kedar Paudel, former Judge of the High Court and Deputy Executive Director of the National Judicial Academy of Nepal. He briefly highlighted the specific objective of the symposium, which was to provide an insight into the recent developments in forest and protected areas laws and jurisprudence based on scientific knowledge.

Welcome Remarks



JUSTICE BAIDYA NATH UPADHYAY
Executive Director,
National Judicial Academy of Nepal

A very, very warm welcome to everyone at this Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence: Bridging Law and Science.

It gives me immense pleasure to welcome such distinguished personalities to this incredible symposium. I would like to extend my heartfelt gratitude and welcome to our esteemed guest, Right Honorable Acting Chief Justice Mr. Hari Krishna Karki. I would like to thank him for encouraging us by accepting our invitation and being with us at this session.

I would like to welcome all the honorable judges here as resource persons, panelists, or participants. I also would like to welcome all the experts and authorities from different institutions.

Of course, I would like to welcome our friends, our partners from the Global Judicial Institute on the Environment (GJIE) and the Asian Development Bank (ADB), and all their team members.

Ladies and gentlemen, I would like to quote Mahatma Gandhi, “Earth provides enough to satisfy every [person’s] needs, but not every [person’s] greed.”

Greed is unlimited. It is an overwhelming competition. It exhausts the forests. Greed makes the Earth sick, and the symptoms of its sickness are biodiversity loss, global warming, and pollution.



Justice Baidya Nath Upadhyay delivers his welcome remarks (photo by ADB).

Greed is not confined to human beings. Some invasive plants, like the *Eupatorium*, are also very harmful to the forest. A few decades before, the *Eupatorium* caused problems in our forests. This time, we have a problem with the *Mikania micrantha*—another invasive plant disturbing our forests. Human beings are responsible for this because that species is not native to Nepal, Asia, or Europe. It is from South America, so from South America to here, people are the carriers of this flower.

Despite the implementation of laws, the forest is decreasing day by day. Now is the right time. We should think about the environment, especially the forest. We should talk about it, time and again: stop greed and wrongdoing.

It is gratifying to note that the agenda, which we will discuss in different panels, covers a wide range of alarming, burning issues in the very near future—emerging challenges like loss of biodiversity, climate crisis, and access to justice.

We will talk about the science, for example, Deoxyribonucleic acid (DNA) mapping. We are also talking about scientific evidence, such as satellite data. We have a very important, very interesting three days ahead. I hope this will definitely enhance our capacity and efficiency so that we can do better for our forests. We hope this capacity building symposium will inspire some ideas and discussions to help us make a very effective legal system and implementing agencies. No matter how much we can do by ourselves, the spirit of true cooperation and action-oriented efforts to address the problem and seek the solution will matter a lot.

This three-day symposium will derive a mutual understanding or conclusion and contribute ideas to a very effective type of model law. That is the first step. If we can derive some common forest act from this, then that would be a great achievement for us and could be applicable to the citizens and beyond.

Lastly, I would like to express my heartfelt gratitude, welcome you again, and wish you the nicest day in Kathmandu. Thank you very much.

ADB's Partnership in Nepal



ARNAUD HECKMANN

Principal Portfolio Management Specialist (Head),
Nepal Resident Mission, Asian Development Bank

Honorable Hari Krishna Karki, Acting Chief Justice of Nepal; honorable judges and justices of South Asia and beyond; Honorable Baidya Nath Upadhyay, Executive Director of the Nepal Judicial Academy (NJA); distinguished speakers, ladies and gentlemen, good morning. Namaste.

On behalf of Asian Development Bank (ADB), I would like to extend a warm welcome to all the participants. ADB is delighted to partner with the NJA and the GJIE to co-host this historic regional knowledge-sharing event. This symposium represents the first in the region to bring together judges, policymakers, legislators, law officers, and community members to catch up on forestry and protected area conservation. The world is racing to respond to a triple planetary crisis of pollution, climate change, and biodiversity loss. Forest and protected areas are vital for responding to this crisis and for our planetary health and shared future. Yet despite existing legal frameworks, forests continue to disappear and there is more work that we need to do to save our planet. For this, collective effort through stakeholder communication, collaboration, and coordination is critical.

ADB is committed to enhancing knowledge and national capacity for managing the environment and adapting to climate change and disaster risk, in which balancing the protection of natural resources while fostering the global development agenda is always our key priority. ADB has been supporting Nepal's development efforts for more than five decades. Our active portfolio of \$3.2 billion comprises infrastructure sectors such as energy, transport, urban water supply, urban infrastructure, and others. ADB is committed to preserving Nepal's environment and biodiversity in all its operations. Our country partnership strategy for Nepal includes environmental sustainability and resilience as strategy pillars. Similarly, our Strategy of 2030 emphasizes building climate and disaster resilience and enhancing environmental sustainability in our operational priorities.

ADB is supporting this symposium and its regional knowledge and supporting systems of strengthening judicial capacity towards sustainable economic development in Asia and the Pacific, which is executed by the Office of General Counsel's Law and Policy Reform Program (LPR). The technical assistance supports judges in Asia and the Pacific in adjudicating commercial, environmental, and climate change disputes with dedicated training, knowledge resources, and events like this one. ADB has championed Asian judges for over a decade because we recognize that strong and well-equipped judiciaries uphold the rule of law to ensure that ADB development member countries meet their goal for environment and climate-friendly sustainable development.



Mr. Arnaud Heckmann addresses the symposium participants (photo by ADB).

It is only by recognizing our common goals and working together that we can alter the consequences of deforestation and restore our natural assets, as envisaged in the Global Biodiversity Framework agreed at the recent 15th Conference of the Parties (COP) in Montreal.¹ I am glad to see a diverse group of professionals assembled here today, sharing a common goal with a collective spirit. I am sure we will all engage in insightful discussions on environmental law and policies and share our own experience and knowledge that will help formulate practical recommendations for administering an effective environmental justice mechanism in the country.

With that, I wish you all a very good day and all the best for the symposium. Thank you.

¹ United Nations Environmental Program, 2022, [Kunming-Montreal Global Biodiversity Framework](#), CBD/COP/DEC/15/4 (19 December 2022).

Opening Remarks



JUSTICE ANTONIO HERMAN BENJAMIN

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

Good morning. It is a great pleasure to be back in Nepal and Kathmandu. In this segment, my role is to thank the great people behind this event.

I begin by thanking the Judicial Academy of Nepal. I have been working with this institution for several years, as you heard from the Executive Director, my colleague, Baidya Upadhyay. Deputy Director Kedal Paudel, many thanks also for all the work that you have been doing with your team. Thank you to the world community of colleagues that are here—the judges—and I say world community because of the number of people you represent here, many times the population of my own country. To all of you who decided to come here and have this dialogue with us, we are all learning. Many thanks to all of you.

Many thanks to my two colleagues who have been our partners, it seems, forever. I have been very privileged to work with them. I see my brother Justice Ananda Bhattarai. For those who have not met him, he is a hero for good judges. The other one is Justice Sapana Malla. They are both extraordinary. When we think about being a good judge, we take them as models. As President of the Global Judicial Institute on the Environment, I am very proud to work with them.

To ADB, Monsieur Arnaud Heckmann, it is impossible to thank ADB for all you have done for judicial education. ADB is not just the pioneer in judicial education at that level in the world. ADB is the very best in doing so. Congratulations to Christina Pak and the extraordinary team. Keep in mind that there is nothing like the judicial education program of ADB anywhere in the world. The countries of the region are fortunate to have such a group of people absolutely dedicated to the rule of law and judicial education.

I would like also to thank our colleagues from the World Commission on Environmental Law, especially Professor Christina Voigt. The commission has been working with Nepal and this region for many years.

From the GJIE, let me thank the two Academic Special Advisors, Professor Nicholas Bryner and Professor Eeshan Chaturvedi. They have been helping the GJIE for many years.

Finally, Chief Justice Hari Krishna Karki, we would not be here without your support. You have a group of judges in this country that are among the best in the world. Also, this region has some of the best judges in the world, and we all should celebrate this every time we get together. Many thanks.

Day 1 Opening Ceremony



Justice Antonio Herman Benjamin gives his opening remarks with the symposium participants in view (photo by ADB).



Justice Benjamin and Acting Chief Justice Hari Krishna Karki shake hands as Justice Baidya Nath Upadhyay looks on (photo by ADB).

Sinharaja Forest Reserve in Sri Lanka. The forest reserve is a UNESCO World Heritage Site. It is home to over 50% of Sri Lanka's endemic species of mammals and butterflies, as well as many kinds of insects, reptiles and rare amphibians (photo by Sadeep Jayashankha/Unsplash).





3

KEYNOTE SPEECHES

Keynote Speech: Environmental Jurisprudence in Nepal and the Importance of Regional Judicial Networks



JUSTICE SAPANA PRADHAN MALLA
Supreme Court of Nepal

Good morning, everyone, and welcome to Nepal: Right Honorable Chief Justice Hari Krishna Karki, Justice Antonio Benjamin, fellow justices from India, Bangladesh, Maldives, Pakistan, Philippines, and Sri Lanka, ADB representatives, representatives of NJA, WWF representatives, representatives from the press, lawyers, civil society members, foresters, and excellencies.

We have come a long way in the mission of environmental justice since 1972, after the Stockholm Declaration. Laws have evolved, principles are evolving, and jurisprudence is evolving. At the same time, environmental risks have also become more apparent, and their assessment and management are more complex.

In Nepal, the judiciary was alert and proactive with environmental protection even before the constitution and legal framework were formulated. In 1953, explosives were used to catch fish in the Tinau River, and the Supreme Court declared such practices illegal. At that time, there was no environmental law, but the court used laws on the disruption of public decency. The principle of sustainable consumption was practiced even then.

In the 1964 Bhugol Park case, construction in the heart of Kathmandu affected citizens' morning walk, a place where they could breathe. Although the majority of justices found that the petitioners lacked *locus standi*, the dissenting opinion recognized that such deprivation violated the right to a healthy environment. The importance of widening *locus standi* was raised even then.

Until the 2007 Interim Constitution of Nepal took effect, it was the judiciary that protected the environment—upholding rights and linking them with the right to life. With the enactment of the 2015 constitution, well-defined and wide-ranging rights relating to the environment became non-derogable, fundamental rights, including the recognition that victims of environmental pollution and degradation shall have the right to be compensated by the polluter.

The constitutional guarantee of environmental rights is founded upon the notion that any harm to the environment can and does adversely affect the enjoyment of a broad range of human rights. It has paved the way for the judiciary from judicial activism to constitutional activism. The new Environmental Protection Act, including a chapter on climate justice, is a product of judicial intervention in different cases, including the initiative case of *Godavari Marble*, filed by



Justice Sapana Pradhan Malla gives her keynote speech (photo by ADB).

Advocate Prakash Mani Sharma. In a landmark judgment in *Advocate Padam Bahadur Shrestha v. Office of Prime Minister, et al.*, the court cited the principle of *parens patriae* and deemed the responsibility of the state to adapt and mitigate climate change by working to protect the environment. Although the Environment Protection Act, 2053 included some provisions related to climate change including environment protection, the court found that the provisions were inadequate for adaptation and mitigation of climate change and thus ordered for formulation of a separate law in the context of adaptation and mitigation of climate change and address the problem.¹ The Nepali Supreme Court has been activating constitutional provisions in holding the government and private institutions accountable for their inaction, insufficient action, and negative action towards environmental protection.

In recent years, with the increase in development work, there has also been an influx of public interest litigation. In those cases, the court widened the scope of justiciability. Judges also did more than settle the disputes and issue environmental law decisions. I would like to share some of the concepts that the Supreme Court of Nepal has affirmed.

¹ *Advocate Prakash Mani Sharma vs Godavari Marble Industries Pvt. Ltd. and Others*, Writ Petition 068-WO-0082 (Supreme Court of Nepal, 16 April 2015).

Keynote Speeches



Justice Sapana Pradhan Malla with the other opening and keynote speakers (photo by ADB).

The court confirmed that the expression of life does not refer to mere existence. It incorporates all those facets that are an integral part of life itself and those matters which form quality of life. It has also confirmed the importance of human health and that human life cannot simply be sacrificed. It has also been said that there is no true development in the destruction of the environment.

In another case, the court gave meaning to our traditional understanding of our relationship with the environment—not only the right to nature, but the right of nature and dignity of nature should be at the center of justice. In the *Fewa Lake* case, a famous tourist location in Nepal, the lake was shrinking due to encroachments.² The court ordered the government to take necessary precautions to minimize additional risks to the conservation of Fewa Lake, including making arrangements to remove constructions within 65 meters (m) from the bank of the lake to maintain the water level. The court ordered that Fewa Lake be declared as a protected watershed area to preserve the dignity of the lake.

In quashing the decision to open a cable car on the lakeside, the judgment explicitly mentioned that when the land on which Basundhara Park and Rani Ban Forest are located was acquired, the aim was to create a greenbelt and biodiversity park. Thus, for the protection of the lake,

² *Bhagwati Pahari vs Prime Minister and the Council of Minister*, NKP 2018 (2075), Decision No. 10086 (Supreme Court of Nepal).

no deforestation or construction work should be done in that area. In that case, the court said that natural resources should be preserved in their natural condition. It further stated that sustainable development can only be achieved by striking a balance between natural resources and development, minimizing the exploitation of nature, and passing the gift of natural resources to future generations.

Similarly, in the *Chitwan National Park* case, one of the judges who decided the case was Justice Dr. Ananda Mohan Bhattarai.³ It was held that constructing a roadway from within the Chitwan National Park, a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage site, would result in the loss of many of our natural resources, an increase in poaching, the destruction of our unique forest, and a serious impact on climate change. The court reiterated that natural resources are the property of the people of the nation and the government, as a trustee, ought to keep natural resources safe for present and future generations.

Now, the two most recent cases I have to share with you—one is the *Nijgadh* case and the second is the *Churia* excavation case.⁴ Both cases are concerned with large-scale national projects that result in the massive destruction of protected forested areas and biodiversity. The court elaborated on the notion of economic activities versus sustainability, stating that in the absence of one, the other cannot be achieved. Although there was a split decision in *Nijgadh*, both the majority and minority opinions held that cutting down trees covering 8,000 hectares would be disastrous and inappropriate. An alternative to the construction of Nijgadh Airport must be sought. The bench thus quashed the government's decision in this regard, citing the importance of the precautionary principle and the function of the Environmental Impact Assessment (EIA) in reducing harm in development work.

In the *Churia* excavation case, the court held that the government's plan to raise revenue by excavating the Churia Hills would be disastrous for the forest, Churia's biodiversity, and thus, the entire Terai region.⁵ The court issued a mandamus order directing the government not to export stone, gravel, or sand from any area of Nepal until legislation was drafted with provisions aligning with the spirit of the constitution. A leap taken by this judgment is its recognition of the gross and widespread environmental damage as ecocide. It deems the principle of environmental sustainable development to be the most fundamental principle among the principles of state policies.

The importance of EIAs was also extensively discussed in both the *Nijgadh* and *Ambedkar* cases, a second excavation case. Both decisions made authorities conducting EIAs accountable for actions done based on their report. I want to reiterate here making authorities accountable and that EIA is essential for the environmental rule of law.

³ *Ram Chandra Simkhada vs Government of Nepal*, NKP 2019, (2076) Decision No. 10204 (Supreme Court of Nepal, 13 February 2019).

⁴ *Pro-Public and Senior Advocate Prakash Mani Sharma and Others vs Office of the Prime Minister*, Writ No. 076-WF-0006 (Supreme Court of Nepal, 26 May 2022); and *Shailendra Prasad Ambedkar vs Office of Prime Minister*, Writ No. 077-WC-0099 (Supreme Court of Nepal, 6 June 2021).

⁵ *Shailendra Prasad Ambedkar vs Office of Prime Minister*, Writ No. 077-WC-0099 (Supreme Court of Nepal, 6 June 2021).

Keynote Speeches



The symposium participants listen intently to Justice Malla's keynote speech (photo by ADB).

Contempt of court has become a tool for enforcing environmental-related judgments in Nepal. Recently, in one of the plastic ban cases, the court ordered the central government to coordinate with the province and local government to prepare a plan with a monitoring mechanism to implement the previous court decision that banned plastic under 40 microns.

So, what is important here is, yes, we have to give a judgment, but giving a judgment is not enough. We have to have judgments that visualize maintaining the environment, and the judgment should also have some mitigation plans and programs.

However, while I am sharing the benchmarks we have been creating, I also want to share our challenges, especially in environmental-related cases where the implementation challenges are quite deep. We do have a judgment execution directorate in Nepal. Effective results are yet to be seen, so we are here to learn and share landmark jurisprudence and practical approaches for implementation.

For Nepal, the federalization of the state has created confusion among the local, provincial, and federal governments in creating boundaries, entitlements, uses, sharing, and management. They are completely new to this system.

We also want to learn from other judicial reasoning and experience, for the knowledge of judges in scientific matters is limited. In protecting nature, judiciaries are still facing difficulties in establishing harm. We still lack adequate resources. We still lack effective evidence. We lack technical expertise, and we lack connection with the science.

There is the challenge of responding to threats against the independence of the judiciary in sensitive cases, especially those environmental cases that might have political ramifications or run against corrupt interests. The sad reality of the world is that the idea that environmental justice is against development still exists. Most of the time, the court is criticized for being against development, and that was openly expressed in the *Nijgadh* airport case. In protecting the national environment parks, in protecting trees, and in protecting wildlife, we need to give alternatives to minimize the harm. Therefore, we need to question ourselves: what does development mean to us when our constitution and international normative framework recognize environmentally sustainable development? The time has come to communicate collectively that development is not a project; it is a process.

There is an international legal framework focused on climate justice, including the Paris Agreement.⁶ We also have the Convention on Biological Diversity and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).⁷ There is also the UN Economic and Social Council Resolution Number 2015/33 on International Arrangements on Forests Beyond 2015.⁸ Hopefully, this resolution will guide us in protecting the environment.

Nevertheless, we still lack a regional environmental justice mechanism. Therefore, networking is equally and critically important. Matters like natural resource sharing, environmental refugees, climate change, and transnational environmental crimes need a strong regional network.

Large forests, such as the Sundarbans, cover large areas of India and Bangladesh, the visitation of Shivalik Hills crosses national boundaries, and the water from the Himalayas flows all over South Asian rivers, including the Indus River, the Ganges, and the Brahmaputra. The Himalayas affect the climatic weather conditions of all South Asian areas lying in the Tibetan plateau. These resources do not end where state boundaries begin. Mutual and harmonious efforts to prevent the push factors causing the degradation of these resources and forge common solutions are the most significant paths forward in environmental protection.

In protecting forests, forest fire is the least focused area at present. Since we have many experts from Australia and abroad, it will be interesting to learn from your experience in protecting forests against fires.

⁶ Paris Agreement, Paris, 12 December 2015, United Nations Treaty Series, No. 54113.

⁷ [Convention on Biological Diversity](#), Rio de Janeiro, 5 June 1992, United Nations Treaty Series, Vol. 1760, No. 30619, p. 79; [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#), Washington, 1 July 1975, United Nations Treaty Series, Vol. 993, No. 14537, p. 243.

⁸ United Nations, Economic and Social Council, International arrangement on forests beyond 2015, E/RES/2015/33 (5 October 2015).

Keynote Speeches

Further, environmental issues are subject to profound disagreements. Efforts to identify common problems and collectively discuss effective and comprehensive methods for the judiciary to devise solutions that bring local, regional, and global issues and solutions to the forefront are essential. In this context, gathering justices from the region along with all key stakeholders like foresters, scientists, and environmental experts from various nations under one roof to discuss and find solutions to common and unique environmental concerns is paramount.

The idea of a model forest legislation has also been emerging. This will not only bridge the gap in the law. We believe that a model legislation will definitely strengthen the quality and implementation of domestic legislation by incorporating values and best practices and collectively addressing issues of forest and protected areas.

However, transforming laws and policy into effective implementation requires massive commitment from various agencies, including cross-border and international cooperation and assistance. Jurisprudence on protecting the environment, forests, and biodiversity from the Supreme Court has given us an opportunity to call on the State to be engaged with its positive obligations, bringing due diligence to it.

Finally, thank you, ADB team, for recognizing the importance of supporting this initiative. I must say, for this reason, environmental justice is vibrant because of the presence of ADB.

I would also like to thank you, the National Judicial Academy (NJA), for your tireless work to make this meeting happen. Justice Herman Antonio Benjamin, for your passion to protect the world from global warming and for environmental justice. Thank you for making it happen in Nepal. You are our hero. I would also like to thank you, our Chief Justice, our Chief Registrar, and the Executive Director of NJA, Justice Baidya Nath Upadhyay, for extending all the support to make it happen. Finally, and most importantly, the delegates from the region who have come, giving up their work, for environmental justice. Thank you for making time to be here to save a sustainable future. Thank you.

Keynote Speech: Why Forests and Protected Areas Matter for Judiciaries Worldwide



JUSTICE ANTONIO HERMAN BENJAMIN

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

In ten minutes, we can say very little, but sometimes we can say a lot. I would like to congratulate those who put the program together.

Let me begin where we should—how forest cases are being dealt with at the Supreme Court level. So, it was extraordinary to listen to Justice Malla because she began with action, law in action. Now, we are going to have a few minutes of law in theory on forest law.

I intend to cover, first, some key highlights. Second, to mention, but we do not have the time to explore it, an issue that is absolutely critical in forest protection, which is ownership. We tend to forget that. Third, to give a panorama, a sort of tour de force, on the legislative objectives, models, and instruments. Finally, to allude to some emerging legal principles that have become and will become even more relevant for the protection of forests globally. From a comparative law perspective, and later in the program, we are going to hear more specific information from those that come from science. I will focus on the legal aspects.

The first key aspect, which is not entirely legal, is that we have diverse and complex habitats when we say forests, even temperate forests.

Moreover, forests were historically conceived as a local legal issue. So, cases focused on the clearing of one hectare here, 100 hectares there, or even 100,000 hectares in a continental country like Brazil. But that would still be a local issue. The forest is not a local issue anymore. It has global importance.

It is relevant to stress that we will be discussing some legal concepts that have been with us for many, many years—decades or even centuries. But a lot of them are still emerging, which is both good and a little bit risky because it means that we, the judges, are learning. Even the legal experts are learning, and all that is evolving along with the jurisprudence.

The golden rule for us judges—and we cannot forget that—is that we should keep the forest. We should restore the forests, not with exotic species, and enrich and expand them. The good news is that this intention is not just in our minds. It is in constitutional provisions and normative frameworks. I can tell you, and the country reports will confirm this, that this goal is in the legislative framework—if not the full package but in elements of the package—of every country represented here.

Keynote Speeches

Within these legal frameworks, judges have a distinct role, which we will discuss over the course of today, tomorrow, and the day after. Nowadays, judges are not seen as entities separated from the rest of the government. We are a part, a fundamental part, of the rule of law. There can be no real rule of law if the judiciary is absent or if it is not a respected and independent judiciary with resources and knowledge. As we have here in Nepal, good judicial academies are also essential. All this fits within a new concept that we call the environmental rule of law.

Ownership systems within the environmental rule of law also create challenges for judges. In many countries, we have mixed systems of ownership. Other countries have one to two systems of ownership, which should be easier to work with, but not always. For example, in Indonesia, forests are deemed public land by the constitution. However, this system does not necessarily translate into a better system of judicial protection of forests. Another example is the Nepalese 2019 Forest Act, which has many different types of forests and ownership. I want to highlight that when working with the legislative frameworks, we must pay attention to ownership rights because they have a huge impact on how we protect forests. The most common system of forest ownership is what I call special legal regimes. We have a potpourri of ownership systems. But again, I do not have the time to explore that in depth.

Legislative objectives are talking about values. Lawmakers set their values and connect them with objectives in the law, constitution, and so on. Creating legal objectives is not new. Some objectives have been with us since the Hammurabi code, which dates from 4,000 years ago. It made a connection between forests and water, for example.

Traditional objectives can also contribute to legislative character. For example, in the People's Republic of China, we find examples of revolutionary commemoration forests. Further, in Nepal, the 2019 Forestry Act provides for religious forests. Africa and other parts of the world also provide examples of traditional objectives. Adding to these examples are contemporary objectives, bringing in a polycentric approach. Our scientific colleagues will discuss the ecological functions of forests in more detail later in the program.

Legislative models also differ globally. We can have comprehensive legislation protecting forests, as is the case of Nepal and several other South Asian countries. We also see laws that protect special biomes, for example, mangroves in the case of Brazil, the Atlantic Forest, or the Amazon. Other models create area-based protection, such as for Alpine forests, and we will say more about that later.

Legislatures around the world also characterize forests differently, and I have previously mentioned some examples. Justice Sapana Malla mentioned the different types of community forests characterized by the 2019 Forestry Act of Nepal. Forest protection can incorporate traditional law to protect particular trees. We could explore this later. Some international agreements and national laws use species listing, for example, CITES.¹ We list the species that we need to protect, and then we protect individual trees, including through municipal laws.

¹ [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#), Washington, 1 July 1975, United Nations Treaty Series, Vol. 993, No. 14537, p. 243.

After linking legislative objectives with values, we must choose a legislative model and decide which legal instruments we will use, which we judges must administer.

Finally, I hope we can discuss emerging legal principles during the program. We judges have a special love for legal principles. If we were to ask judges what they like the most in law, I can assure the non-judges that most judges would express their love, not for a very specialized normative text, but for principles because they give us the power to adjust the law to new circumstances.

Here are three of those principles. Professor Nicholas Bryner, for example, has written a fantastic article on the *in dubio pro natura* principle. These are principles that—when I say they are emerging principles, it is not that they are emerging in the legal literature, in theory, in or the abstract—are emerging in court decisions, and my hope again is that we will have, later in the program, time to discuss those principles.

Thank you, Chief Justice. Thank you, all.

Inauguration Speech



ACTING CHIEF JUSTICE HARI KRISHNA KARKI
Supreme Court of Nepal

Honorable justices and dignitaries from participant countries, distinguished participants, ladies, and gentlemen.

At the outset, I thank the organizers for this opportunity to open this important event on a very pertinent issue concerning the common heritage of humankind and share my thoughts. Indeed, I am honored and privileged to be a part of this symposium, and I congratulate the organizers on their untiring efforts in bringing this program to Nepal.

When we talk of forest and protected areas legislation, we need to appreciate various perspectives. The environment is dynamic, scientific understanding continues to evolve, and environmental consideration must include philosophical perspectives, economic models, and cultural diversity. It is also essential to recognize that environmental issues are globally interconnected. These perspectives make it difficult to define its concept, scope, actors, and dimensions. Further, the polycentric, interdisciplinary, normative, and scientifically uncertain nature of environmental problems has led to a body of environmental law that stems from globalization and harmonization between different legal systems.

Traditionally, natural resources were protected as the property of human beings. Such resources are now regarded as a common concern of humans as environmental commons. They are often regulated and managed by the state for public benefit. However, smart regulation now recognizes the role of non-state actors in addition to the state. Smart legislation creates space for three key elements: pluralism, complementarity control, and social control. With the rise of smart legislation, codes, and legislature, governmental agencies are not the only actors setting and transforming environment law and forest management. Non-state actors are equally contributing to this field. Contributions from different sectors, including environmental defenders through public interest litigation, are important for achieving sustainable development—the overarching objective of environmental and forest-related legal systems.

Honorable justices and distinguished participants, Nepal has adopted a range of policy, legal, and institutional measures designed to protect and conserve forests. Nepal's forests are home to a multitude of flora and fauna that range from the plain to the middle and high mountains. Forests occupy roughly 46% of the country's landmass, including areas within and outside protected areas.

However, since the adoption of a federal system under its new constitution, Nepal has been facing the challenge of sharing responsibility for managing natural resources, including forests. All three levels of the government (local, state, and federal) regulate biodiversity conservation, while the national forest policy, national parks, wildlife reserve wetlands, and carbon trading fall within the federal government's exclusive power. State and provincial governments manage national forests, while federal and state governments concurrently manage rivers. Local governments manage watersheds and wildlife conservation, while all three levels of government are concurrently responsible for wild forests, wildlife, and biodiversity.

Following the endorsement of the master plan for the forestry sector in 1988, the government applied a participatory approach to forest protection, giving special attention to the rights and responsibilities of local communities in line with the Convention on Biological Diversity in 1992.¹ The community forestry program is one of the successful examples of community members participating in all facets of forest management. Further, since the fourth amendment to the National Parks and Wildlife Conservation Act 1973, 30%–50% of the annual revenue generated from a protected area goes to local communities for biodiversity conservation, community development, and livelihood improvement.

Nepal has different policies and laws for the protection and management of protected areas. Among them, the Forest Act 2019, National Parks and Wildlife Conservation Act 1973, Buffer Zone Management Regulations 1995, and Community Forest Guidelines provide for the protection of forests to a large extent. This legal framework provides for the sustainable management and conservation of forests, including provisions related to forest management plans, community forestry, leasehold forestry, and trade of forest products. It also includes penalties for illegal logging, encroachment, and other forms of forest destruction and aims to protect wildlife reserves and wildlife habitats, improve the regulation of tourism, and enforce penalties for illegal hunting. These established rules and regulations are aimed at improving community-based conservation, promoting tourism development, and facilitating the sustainable use of resources.

The Environmental Protection Act 2019 is the basic legislation that focuses on protecting the environment while stressing the importance of its interconnectedness, interrelationships, interdependence, and symbiotic relationship with humans. This legislation aims to maintain a proper balance between the environment and development, mitigating adverse impacts on the environment and biodiversity and, importantly, addressing the current challenges posed by climate change.

In addition to its national legislation, Nepal has international commitments for the protection of natural resources and biodiversity. It is a party to the United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Ramsar Convention on

¹ Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, United Nations Treaty Series, Vol. 1760, No. 30619, p. 79.

Keynote Speeches



Acting Chief Justice Hari Krishna Karki delivers his keynote speech (photo by ADB).

Wetlands, Montreal Protocol on Substances that Deplete the Ozone Layer, and the World Heritage Convention.²

Honorable justices and distinguished participants, the Constitution of Nepal not only guarantees the right to live in a clean and healthy environment as a fundamental right, but also provides a constitutional remedy for the infringement of those rights through public interest litigation. This grants individuals with a legal standing to access the court directly. In cases of public interest brought before the Supreme Court, it has, on several occasions, ruled for ensuring a balance between development activities and environmental protection.

It has become categorical—developmental activities should not be detrimental to the environment. The Supreme Court has repeatedly interpreted the right to a healthy environment as a precondition for the enjoyment of other human rights, particularly the

² [United Nations Framework Convention on Climate Change](#), New York, 9 May 1992, United Nations Treaty Series, Vol. 1771, No. 30822, p. 107; [Convention on Biological Diversity](#), Rio de Janeiro, 5 June 1992, United Nations Treaty Series, Vol. 1760, No. 30619, p. 79; [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#), Washington, 1 July 1975, United Nations Treaty Series, Vol. 993, No. 14537, p. 243; [Convention on Wetlands of International Importance Especially as Waterfowl Habitat](#), Ramsar, Iran, 2 February 1971, United Nations Treaty Series, Vol. 996, No. 14583, p. 245; [Montreal Protocol on Substances that Deplete the Ozone Layer](#), Montreal, 16 September 1987, United Nations Treaty Series, Vol. 1522, No. 26369, p. 3; [Convention Concerning the Protection of the World Cultural and Natural Heritage](#), Paris, 16 November 1972, United Nations Treaty Series, Vol. 1037, No. 15511, p. 151.

right to life. In Nepal, a number of national environmental policies and laws have resulted from judicial decisions. The Nepali judiciary has also nullified the administrative decisions of government that are deemed harmful to the environment, and it has issued directive orders to address such concerns.

To cite an example, in the *Yogi Narahari Nath* case, the court struck down an executive decision to hand over densely forested land of the Devghat area to an international society for the purpose of constructing a medical college. This area holds historical, cultural, and archaeological significance.³

Similarly, in the *Chitwan National Park* case, the Supreme Court ordered the Nepal government to obtain approval from UNESCO and other stakeholders before constructing any new roads within Chitwan National Park, which was designated a UNESCO World Heritage Site in 1984 due to its exceptional biodiversity.⁴

In the *Bardiya National Conservation Area* case, the Supreme Court deemed that the protection of a conservation area is not limited to the boundaries of a country. It is an issue of global concern.⁵ It highlighted the utmost necessity of proper Environmental Impact Assessments (EIAs) in development activities.

Lastly, this discussion would be incomplete without the mention of the recent *Nijgadh International Airport* case brought to the Supreme Court for the conservation of forests and biodiversity of the Nijgadh area—home to various species of flora and fauna.⁶ The case addressed the challenge of striking a balance between constructing an airport in the Nijgadh area and conserving biodiversity. The judgment emphasized that sustainable development can only be achieved when biodiversity is safeguarded, recognizing the interdependence of natural resource viability and human well-being. Just as environmental protection is intergenerational, so is development.

Honorable Justices and distinguished participants, environment policies, legislation, and institutional resources in Nepal are gradually advancing to incorporate biodiversity conservation, sustainable use of its components, and access and benefit sharing of genetic resources.

Within the federal setup, new types of governance for protected areas, such as privately protected areas and indigenous and community-conserved areas, will require new approaches that need to be enabled by law. Transboundary protected areas offer opportunities for interested cooperation that involves national law as well as international agreements. Climate change demands flexibility in the design of protected area legal frameworks to accommodate

³ *Yogi Narhari Nath vs Ministry of Education*, 1 NKP. 2053 (1996) 33 (Supreme Court of Nepal).

⁴ *Ram Chandra Simkhada vs Government of Nepal*, NKP 2019, (2076) Decision No. 10204 (Supreme Court of Nepal, 13 February 2019).

⁵ *Advocate Ram Kumar Acharya vs Office of the Prime Minister and Council of Ministers*, Writ No. 2068-WO-0639 (Supreme Court of Nepal).

⁶ *Pro-Public and Senior Advocate Prakash Mani Sharma and Others vs Office of the Prime Minister*, Writ No. 076-WF-0006 (Supreme Court of Nepal, 26 May 2022).

Keynote Speeches


both adaptation and mitigation, including creating corridors that ensure connectivity within and among ecosystems.

Protected area systems will require sustainable financing, which involves an array of innovative instruments and mechanisms implemented by institutions that are often not responsible for protected areas. Thus, suggestions would include incorporating the precautionary principle in decision-making, particularly where consequences may be irreversible. Further, informed and science-based decision-making should be applied to the conservation and management of protected areas. Public participation in government decisions, which includes seeking meaningful comments from stakeholders, should be ensured for the effective implementation of laws and decisions.

Social justice and equity should be the underlying principles in the conservation and management of protected areas to ensure that costs and benefits are shared fairly. Provisions requiring participation, negotiation, prior informed consent, and access to judicial processes should be also be prioritized. The assistance of developed countries is necessary, in both financing and technical areas. Stakeholders around the world urgently need to take action and find solutions based on the principle of common but differentiated responsibilities to mitigate climate change impacts to pave the way to a low-carbon economy by lowering greenhouse gas emissions and providing greater access to clean energy solutions.⁷

Honorable justices and distinguished participants, let me conclude by emphasizing that this symposium is a testimony that the forest and protected areas and management is a crucial part of environmental protection. Their protection is possible only through collaborative efforts of nations international agencies, and communities. I am confident that deliberations between the eminent participants on the agenda of this symposium and sharing about our experiences and good judicial practices of our respective nations will definitely bring out new dimensions and creative solutions. It will pave the way for a more active transboundary cooperation to enhance sustainability and to protect and maintain the beauty of forest ecosystems. I wish all the success for this symposium. I also wish the distinguished guests a pleasant stay here in Nepal and a safe journey back home. Thank you so much.

⁷ [United Nations Framework Convention on Climate Change](#), New York, 9 May 1992, United Nations Treaty Series, Vol. 1771, No. 30822, p.107.

A photograph of a deer in a lush, green environment. The deer is the central focus, looking directly at the camera. It has large, upright ears and a dark coat. The background is filled with various types of green plants, including tall grasses and leafy shrubs, creating a dense and vibrant natural setting. The lighting is bright, suggesting a sunny day.

A deer in Chitwan National Park. [The Chitwan National Park](#) is a protected area and UNESCO World Heritage site. It also has a Ramsar site, the Beeshazari Tal, in its buffer zone and is home to over 700 species of wildlife, including four species of deer, the Bengal tiger, and Indian rhinoceros (photo by Mike Blank/Unsplash).

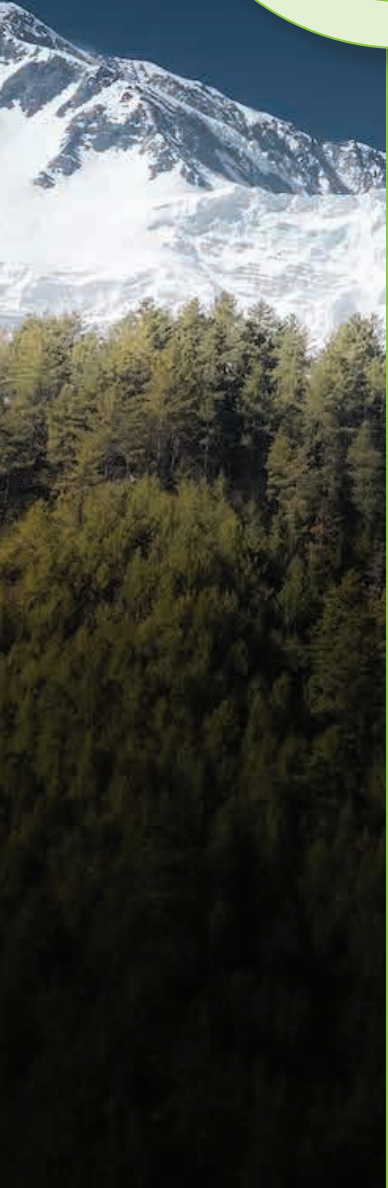
A portion of the Himalayan mountain range located in Nepal. In the Himalayas, climates range from tropical to perennial snow and ice depending on the elevation. This results in complex and diverse, but interconnected, eco-regions (photo by Slava Auchynnikau/Unsplash).





4

PLENARY:
Global Panorama
of Forest &
Protected Area
Law, Science &
Management



Symposium Objectives



CHRISTINA PAK

Principal Counsel & Team Leader,
Law and Policy Reform, Asian Development Bank

Welcome back, everyone. I am Christina Pak. I am a Principal Counsel of the Asian Development Bank (ADB). We are so grateful to all of you for joining this important and extraordinary conference because of the diverse stakeholders that are in this room. Our sincere gratitude to the National Judicial Academy and the Supreme Court of Nepal for hosting us in this beautiful country with lots of forest cover and rich forest laws and jurisprudence.

We are so happy to be here and learn from Nepal. Before we hear from our distinguished panel, I would like to give you more context for this symposium and our objectives in bringing all of you together.

ADB is supporting this symposium under its Law and Policy Reform Program (LPR). Under the program, we engage with legal and judicial stakeholders, policymakers, legislators, law enforcement agencies, the private sector, and civil society on key areas such as environment and climate change to support inclusive and sustainable development in ADB's developing member countries. We assist governments with policy advice, draft laws and regulations, and create tailored capacity building programs.

You may have heard about ADB's judicial program, which has regional and in-country programs. It also convenes knowledge-sharing conferences, such as today. Justice Malla perfectly underscored the difficulties with climate and environmental adjudication and implementation in this vast and interdisciplinary area. To overcome these challenges, we say there is a need for whole-of-government and whole-of-society approaches. Further, given the global implications of forests, I would say we need a whole-of-planet approach.

ADB has run its judicial capacity building program for 12 years. It was one of the LPR Program's early investments. We started the environmental law program before launching our judicial program in commercial law. We have also recently added another program to strengthen the handling of gender-based violence cases. Environment and climate change cases are, I would say, complex and highly specialized, as are commercial disputes and gender-based violence cases. They require technical, specialized knowledge, and that is why we have selected these areas—not to mention their critical implications for inclusive and sustainable development. Now that we are building our judicial capacity building program on the issue of forest protection and management, our challenge is to figure out how to do this so that judges have the tools and knowledge to do their jobs and make better decisions. Of course, this scientific knowledge—the knowledge that judges need—is basically outside the courtrooms. Science sits



Christina Pak, Principal Counsel of ADB and Team Leader of the Law and Policy Reform Program, gives an overview of the symposium objectives (photo by ADB).

outside of judicial expertise, but it is now becoming essential—essential to decision-making and essential to better adjudication and different judicial processes.

So, let me turn to this symposium's purpose. The overarching premise is to gather diverse stakeholders for the first time to discuss the issue of forests and forest protection. We know the challenges are immense. So, how do we respond when, as Justice Benjamin noted, the laws and issues have evolved, and deforestation in the modern context transcends borders?

The first premise, which is of critical importance, is that we think there needs to be an updated understanding of the legal framework for forest protection and management aligning with the modern context in the 21st century. This understanding is not just national but regional and global. Because, as we have heard, forests are now global public goods. It is basically everyone's issue, and everyone needs to be part of the solution, and everyone owns it.

We are starting in the South Asian region because of its rich jurisprudence, because of the laws, because of our host country's drive, and because of your willingness to convene and discern what the legal frameworks and the jurisprudence tell us. My questions for you, then, are: what are the common themes that we could draw out and what are the differences? What are the emerging trends in forest laws and jurisprudence that we could all learn from? Are there

Plenary: Global Panorama of Forest

innovative legislative solutions which can be adopted? How can we create an integrated legal framework in harmony with other relevant laws and international commitments?

Forestry sector stakeholders are diverse with competing interests. They are also changing. Carbon market participants are emerging stakeholders as some carbon market projects are now associated with forests. Carbon markets are also driving the evolution of new legal principles that we need to understand and incorporate into legal frameworks. For example, what is carbon? And what are carbon sequestration rights?

The second premise is addressing persistent implementation challenges. The laws are there—we have heard that from our speakers. But what are the real issues? Why are the laws not being effectively implemented? Justice Malla also raised a critical point about the challenges of enforcing judgments. Tracking judgment outcomes and monitoring implementation might ensure that laws are carried out and that is something I am interested in.

Multi-stakeholder dialogue, such as this symposium, will be central to developing the model forestry law. The 2030 Agenda for Sustainable Development has emphasized that integrated multisectoral approaches to sustainable development are applicable.¹ They are equally relevant to forest protection and sustainable forest management. So, it is quite appropriate and extraordinary that all of us have gathered. We really look forward to your active engagement and your perspectives because this is all going to feed into the Model Forest Act Initiative.

The third premise is bridging law and science, which seems like an ambitious goal. I think scientists may feel like a fish out of water in a courtroom. Similarly, judges may feel like an alien in a laboratory. This symposium aims to provide a forum to explore the two worlds and how we can all work together towards a common goal. So, for example, how can science help with evidentiary issues? And how can it underpin rulings and remedial orders and improve monitoring and forest management? It is, therefore, critical that all of us improve our understanding of forestry.

Finally, this symposium is about a Model Forest Act Initiative, which ADB, the Global Judicial Institute on the Environment (GJIE), and the International Union for Conservation of Nature (IUCN) World Commission on Environmental Law (WCEL) will launch this year. ADB is supporting this initiative via technical assistance for a [Legal Toolkit for the Protection of Vital Ecosystems for Climate, Biodiversity, and Livelihoods](#), managed by ADB's Office of the General Counsel.

We believe that this Model Forest Act is timely for all the reasons I have stated, and we think it can be transformational. It is an opportunity to take into account the current needs and challenges, legal innovations, and the latest science. So, your contribution over the coming days is critical to the Model Forest Act.

¹ UN General Assembly, [Transforming our world : the 2030 Agenda for Sustainable Development](#), A/RES/70/1 (21 October 2015)

Plenary: Global Panorama of Forest

We are starting the process here in South Asia and will undertake consultations in other regions, such as Southeast Asia and globally. We will feed the outcomes of these consultations into the Model Forest Act. We will also convene a drafting committee comprised of globally recognized legal experts, forestry experts, and scientists to develop the general provisions of the Model Forest Act that we hope can serve as a useful toolkit or inspiration for legal reform. The final product will be this Model Forest Act with an accompanying legislative guide, with commentaries and explanations. We are really looking forward to how this is going to evolve, and we will keep you updated.

In conclusion, forests can solve multiple global crises at the same time—that is what I have heard. Forests are everything. So, we really look forward to finding solutions on how to progress forest protection and sustainable management of forests. With that, I will now turn to our plenary session.

Forests and the Climate Crisis



CHRISTINA VOIGT

Professor, Oslo University School of Law,
Chair, International Union for Conservation of Nature
World Commission on Environmental Law

Thank you. Thank you so much, dear Christina. It has been a pleasure waiting because I had the privilege of listening to the wonderful speeches so far, and I thank you so much for inviting me.

Before I start, I would like to send my very warmest greetings from Oslo to the honorable judges, participants, and speakers at this regional symposium on forests and protected areas. I apologize for not being there in person. I would have loved to be there. It is a great honor and privilege for the World Commission on Environmental Law (WCEL) to partner in this important event. We hope that it will function as a source of inspiration and knowledge for the judges and the members of the judiciary joining us here today.

I would also like to express our thanks to our co-partners, the Global Judicial Institute of the Environment (GJIE), the NJA, and other judicial academies, and, of course, ADB, and in particular, the people behind this symposium, like Christina Pak and Briony Eales and, of course, Justice Antonio Herman Benjamin, who is the intellectual mastermind behind this symposium.

Now, I will speak about the international law on forests in the double climate and biodiversity crisis. We have already heard that forests are home and a source of livelihood for millions of people worldwide. People live in forests; and they live from forests. That can be done in sustainable ways like indigenous peoples have done for thousands of years around the globe as guardians of forests. But they are also home to most terrestrial biodiversity. Millions of species of flora and fauna live in forests, and some are even hotspots of biodiversity. Many of these species we do not know and most likely never will. The genetic diversity found in forests is larger than in any other ecosystem on this planet. By destroying forests, the book of life is disappearing before our very eyes before we even manage to read it.

Forests are the green lungs of the Earth, and they have important functions in the global climate system by sequestering carbon dioxide in their biomass and soil. If we want to stand a chance of keeping global warming from overshooting 1.5 degrees, then we need forests. We need to conserve the forests that we have, and we have to expand forest cover. Forests filter water and air and they provide amenity and values—spiritual, cultural, and religious values. They are our soul.

But forests are under threat. Over 80% of the world's forests have already been destroyed or irreparably degraded. Every year, about 100 million hectares of forests are being destroyed, and this is due to many threats. It is important to know these threats because we can only address them if we are clear about their complexity and multiplicity.



Professor Cristina Voigt, joining virtually, speaks on forests and the climate crisis (photo by ADB).

The main threats to forests are land use change and habitat fragmentation and loss. This can have many faces. It can start with small roads going into the forest, then turning into a bigger road, small villages, developments, bigger villages, and fields. One main driver is agriculture, the clearing of forest as land in order to make place for cattle raising for industrial agriculture, palm oil, and soil production.

Forests, of course, also supply cheap timber and forest products—wood products—to the world. Illegal logging is a major threat, but not only illegal logging. Much logging is perfectly legal, and this is where a significant problem lies: this destruction of forests is allowed and the price for it—such as escalating climate change, biodiversity loss, and community displacement—is not reflected in the cost of forest products. This price remains an externality. It is not being accounted for. It is fair to say that just like climate change, deforestation is perhaps the biggest market failure. The forest is under threat from climate change, introduced and invasive species, pollution; the list of threats is long.

Despite their important function, global value, and the threats they face, there is no comprehensive international legal instrument to protect forests. That, I think, is a significant shortcoming of international law and international environmental law in particular because a global instrument is necessary in order to create a common standard and level playing field and to increase international cooperation on the protection of forests, in particular with regard to finance flows.

Plenary: Global Panorama of Forest

It is not that it has never been tried before. At the 1992 United Nations (UN) Conference on Environment and Development in beautiful Rio de Janeiro in Brazil, it was expected that a binding instrument on forests would be delivered.¹ But that did not happen for several reasons. Instead, the Forest Principles—formally known as the *Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation, and Sustainable Development of all Types of Forests*—were adopted.² This is a non-legally binding document. It makes several recommendations for the conservation and sustainable development of forestry.

Following the Forest Principles, in 2000, the UN Economic and Social Council (ECOSOC) established the United Nations Forum on Forest. The Forum's main objective is to promote the management, conservation, and sustainable development of all types of forest and to strengthen long-term political commitment to forest protection based on the Rio Declaration, the Forest Principles, and other milestones in international forestry policy.³ I think it is fair to say that the United Nations Forum on Forests is an important forum to meet, discuss, and coordinate. But so far, it has achieved relatively little in halting and reversing deforestation.

But there are other legal instruments that, although not directly or exclusively aimed at forests, have some bearing on states' forest policies and laws. As mentioned previously, forests play an important role in the climate system. They are recognized as sinks and reservoirs of greenhouse gases. The 1992 UNFCCC, also a Rio outcome, sets up the commitments of all parties to promote and cooperate in the conservation and enhancement of sinks and reservoirs of greenhouse gases, including forests, as well as other terrestrial, coastal, and marine ecosystems.⁴

Forests were included in the Clean Development Mechanism, established under the Kyoto Protocol.⁵ The mechanism enabled developed countries to finance climate projects in developing countries and receive credits for the emission reductions achieved. Developed countries could then use these credits to meet their obligations under the Kyoto Protocol. Under the Clean Development Mechanism, it was possible to include afforestation or reforestation projects, but this never really took off.

What took off, based on the experience with the Clean Development Mechanism, was an incentive mechanism established in the early 2000s under the UNFCCC aimed at reducing emissions from deforestation and forest degradation in developing countries through results-based and other types of payments made by developed countries. This is usually referred to as REDD+.

¹ United Nations. 1993. [Report of the United Nations Conference on Environment and Development](#), Rio de Janeiro, 3–14 June 1992. A/CONF.151/26/Rev.1 (Vol. I). New York. pp. 9–479.

² United Nations. 1993. [Report of the United Nations Conference on Environment and Development](#), Rio de Janeiro, 3–14 June 1992. A/CONF.151/26/Rev.1 (Vol. I). New York, pp. 480–485. The Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (commonly known as the Statement of Forest Principles) is Annex III of Resolution 1.

³ United Nations. 1993. [Report of the United Nations Conference on Environment and Development](#), Rio de Janeiro, 3–14 June 1992. A/CONF.151/26/Rev.1 (Vol. I). New York. pp. 9–479; pp. 480–485.

⁴ [United Nations Framework Convention on Climate Change](#), New York, 9 May 1992, United Nations Treaty Series, Vol. 1771, No. 30822, p. 107

⁵ [Kyoto Protocol to the United Nations Framework Convention on Climate Change](#), Kyoto, 11 December 1997, United Nations Treaty Series, Vol. 2303, No. 30822, p. 162.

REDD+ is governed by a very detailed framework, which, inter alia, includes safeguards to protect the rights and knowledge of indigenous peoples and local communities, as well as biodiversity and primary forests. It aims to prevent leakage and reversals. It is also based on principles such as that reducing deforestation needs to be real, measurable, permanent, and non-reversible, and it needs to be carried out with high environmental integrity. Payments are based on achieved, monitored (often done by satellite monitoring), measured, and independently verified emission reductions.

Norway was on the frontline of developing REDD+ and has shown how it could work through bilateral and international agreements, for example, with Brazil or Indonesia. But we also know that challenges exist. Challenges include changes in government, changes in policies, regression of forest policies, insufficient legislation, or non-enforcement of existing legislation. All these challenges have been encountered in the context of implementing REDD+. But it also has been shown that it can deliver results.

For example, Indonesia has made significant strides in forest policies and laws. The centerpiece of Indonesia's forest policy is the Forest and Other Land Uses (FOLU) Net Sink 2030 Operational Plan. It is ambitious because it aims to transform Indonesia's forests into a major carbon sink, which means that more CO₂ is stored in forests than being released by 2030. Indonesia's implementation of that plan is bearing fruit. The country has received payments bilaterally from Norway and also through the Green Climate Fund and World Bank. These transfers are, of course, the main objective behind REDD+ and international cooperation on protecting forests—to create international cooperation and collaboration that leads to significant flows to develop country parties because we all know it comes at a cost. It is not



The symposium participants listen attentively to Professor Voigt's presentation (photo by ADB).

Plenary: Global Panorama of Forest

cheap, easy, or quick to protect forests. In a way, the value of standing forests has to be higher than the value of cutting them down in a world that mostly relies on cost-benefit analysis.

REDD+ is now part and parcel of the Paris Agreement. Article five, paragraph two, included all the existing decisions in the agreement. Since then, many developing countries have included forest and REDD+ policies in their nationally determined contributions (NDCs) under the Paris Agreement.

Moving away from REDD+, we see fascinating developments in current climate negotiations. For the first time, we see a much more integrated approach to including biodiversity, forests, and nature conservation in the context of climate change mitigation and adaptation.

For example, at the 2022 COP, which took place in Sharm el-Sheikh in Egypt, the 196 parties to the Paris Agreement recognized the urgent need to address—in a comprehensive and synergetic manner—the interlinked global crises of climate change and biodiversity loss in the broader context of achieving the sustainable development goals. They also recognized the vital importance of protecting, conserving, restoring, and sustainably using nature and ecosystems for effective and sustainable climate action. They also emphasized the importance of protecting, conserving, and restoring nature and ecosystems to achieve the Paris Agreement temperature goal, including through forests and other terrestrial ecosystems acting as sinks and reservoirs, while ensuring social-environmental safeguards. This recognition may sound obvious. But it is the result of a long-term, multi-year struggle to have the importance of forests and nature conservation recognized under the UN's climate regime, which was primarily focused on greenhouse gas emissions and basically industrial ones.

But the UN climate treaties are not the only place for forest protection in international law. There are other treaties. Justice Antonio Benjamin already mentioned CITES.⁶ There is also the Convention on Biological Diversity of 1992.⁷ Under the Convention on Biological Diversity, parties are to conserve biological diversity, sustainably use its components, and fairly and equitably share the benefits arising from the use of genetic resources. The tool for achieving this objective is the National Biodiversity Strategy and Action Plans (NBSAPs), which each party has to communicate to the world. While the 1992 Convention, also an outcome of the Rio Conference, is rather vague—it is general and abstract—parties traditionally adopt 10-year strategic plans. The last strategic plan ran from 2011 to 2020. It was adopted in Japan in 2010 and included the Aichi Targets, twenty targets of which only one of which was achieved, and only a little was achieved. Mainly, these targets remained unmet. This clock has now been reset.

At COP15 (2022) in Montreal, the Convention on Biological Diversity (CBD) parties adopted a new strategic plan called the Kunming-Montreal Global Biodiversity Framework, which is to be implemented until 2030.⁸ It is a 10-year plan, 2020 to 2030, with four goals and 23 targets to

⁶ [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#), Washington, 1 July 1975, United Nations Treaty Series, Vol. 993, No. 14537, p. 243.

⁷ [Convention on Biological Diversity](#), Rio de Janeiro, 5 June 1992, United Nations Treaty Series, Vol. 1760, No. 30619, p. 79.

⁸ United Nations Environmental Program, 2022, [Kunming-Montreal Global Biodiversity Framework](#), CBD/COP/DEC/15/4 (19 December 2022).

be achieved within the next 7 years. Hopefully, they will not meet the fate of the Aichi Targets of the previous plan—which were not achieved, but this time are effectively implemented.

Target three is of particular interest to our conversation, but there are also other targets with a bearing on forests. Target three requires parties to ensure and enable that by 2030—in 7 years—at least 30% of terrestrial inland water and coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions, will be effectively conserved and managed through ecologically representative, well-connected, and equitably governed systems of protected areas and other effective area-based conservation measures (OECMs). This 30 by 30 goal—protecting 30% of ecosystems by 2030—is one of the major outcomes of the Kunming-Montreal Global Biodiversity Framework (footnote 8, p. 46). It brings squarely to the forefront the importance of forests, which will form part of the 30% of protected areas covered by other effective area-based conservation measures.

It will be essential for parties to revise and update their NBSAPs. Every single party must now do this in light of the new targets and communicate their revised NBSAPs before CBD COP16 in 2024. Parties will also have to report on the achievement of their NBSAPS using a whole set of indicators, such as, for example, the coverage—the spatial size—of protected areas and other effective area-based conservation measures according to the IUCN Green List of Protected and Conserved Areas, which is managed under the World Commission on Protected Areas. Progress against target three—to protect 30% by 2030—is now a main indicator for all parties to the Convention on Biological Diversity to report (footnote 7, p. 46).

To round up: where are we now? As I said, international law is fragmented. It is multi-polar when it comes to forest protection. There is no holistic agreement, but it is not nothing.

There is a slowly growing whole-of-the-planet approach, as Christina mentioned. We see the increasing specificity of policies, targets, and measures at the international level and also leading to increased cooperation on technology transfer, for example, with regard to monitoring capacity, finance, and capacity building.

The most important aspect, however, lies in appropriate national legislation to implement international standards and rules based on a whole-of-government and whole-of-society approach, based on effective implementation, compliance, and enforcement. It is not enough to have the laws on paper. They also have to be effectively complied with and enforced. Here, the judiciary has an important role to play. There is much room for mutual learning for best practices. This is why we engage in drafting the Model Forest Act that Christina Pak mentioned. We, within the IUCN WCEL together with the GJIE and ADB, and under the chairmanship of Justice Antonio Herman Benjamin, are developing a very prestigious, important, and significant project that we very much look forward to kicking off and seeing developed over the next couple of years.

And with that, I thank you very much and give the floor back to you, Christina. Thank you.

The Science Behind Forest Protection



BILL MAYNARD
Forestry Practitioner

I am a fish out of water. I am very honored to be here among such a distinguished audience. I am also somewhat intimidated. So, I want to thank the Supreme Court for yesterday, taking us to visit that courthouse and giving me the ability to at least meet with some of you before we meet formally here today. I have had nightmares about you all wearing wigs and black robes in front of me. I now know that you do not—you are all human—and all scientists do not necessarily wear white coats and have pointy heads.

I would start this conference by saying that one of the take-home messages, I hope, is we are all human. And the tasks in front of us are so great that we all need to work together on this, whatever our discipline.

It is a very challenging topic to speak to and I have struggled with where to start and what to put into a relatively short speech. I will start by mentioning one notorious scientist whose name was Thomas Midgeley. He had over 100 different patents, but he is best known for two of them—one of which was the brilliant idea to put lead in petrol, and the second one was the creation of chlorofluorocarbons (CFCs). He did not know he was doing any damage when he came up with either of those. But to misquote Oscar Wilde, who said, “To lose one parent may be regarded a misfortune, to lose both looks like carelessness.” Well, if you have one environmentally disruptive patent, it may be a misfortune. To have two environmentally destructive patents is definitely carelessness.

But there are three things I would like to say from the example of Thomas Midgeley. One, always beware of the law of unintended consequences. Two, always consider the precautionary principle. Three, on a slightly more optimistic note, we can learn that with intellectual collective action, it has been possible to put into reverse the negative effects of CFCs and start to rebuild the ozone layer, which CFCs were destroying at a rapid rate at the end of the last century.

Science obviously does not have all the right answers. In fact, scientists only propose a theory in order to challenge other scientists and come up with a theory that proves them wrong. The last person who was considered to have really had the ability to see all across the scientific spectrum in his lifetime was Alexander von Humboldt, who you may have known. He has lots of rivers and mountain ranges named after him. He died in 1859. The year after that, Charles Darwin proposed the origin of species. Since then, we have been expanding our scientific knowledge at such a rate that it is unrealistic for any of us to think that we can stay abreast of it all.

So, I would like to say that not knowing everything is fine. Knowing that you do not know everything is even better. Being humble about the fact that you recognize that you do not know

Plenary: Global Panorama of Forest

everything is also a very important rule of science and possibly of the law as well. But it is also something that I am very well aware of—that in 15 minutes, I am unable to cover everything.

I am not a lawyer. I am a forester. Part of the reason for choosing that profession was I like to be alone among the trees. The only analogy I can think of with judges is that you sometimes like being alone on your bench, amongst the product of the trees, with all your law books. Please forgive my naivete if I use the wrong word about various legal aspects, but I see the legal process as coming in three phases. The first phase is the pre-trial phase, the getting together of a case, the getting together and evidence, in which you are not particularly involved as judges. The second phase is during the court. The third phase is the impact of your judgments. Each of those phases has the ability to be strengthened and to use the ever-increasing pull of scientific information to support you and your ability in the courtroom to come to robust judgments.

Sideroxylon grandiflorum is a tree species which is nearly extinct in Madagascar. Scientists will tell us that it is because of a crime that happened 350 years ago. The crime was wiping out the dodo. The dodo is important in the germination of the seed of the *grandifloris*. Without the seed going through the dodo, it cannot germinate. It took scientists 350 years to work out what the link was between those two events. It is a bit late to think about prosecuting the sailors who wiped out the dodos. But science does provide evidence, and pretty robust evidence at that, in that case.

Thirty years ago, I started my professional career. We got really excited in the early 1990s about satellite data and what it could potentially do. The fact that satellite data could identify a gap in the forest of around 20 m wide was fantastic. It would take us maybe 3–4 days to process the imagery, that is, if the clouds were clear and the environment allowed us to do it.



Bill Maynard talks about the science behind forest protection as Christina Pak and Briony Eales look on (photo by ADB).

Plenary: Global Panorama of Forest

Each satellite image cost about \$5,000 a sheet in Indonesia, which was not particularly practical and a little less expensive than in Brazil. Tomorrow, we will see a short presentation from the World Resources Institute and their forest monitoring program which demonstrates how, now, any of you have access to twenty-four seven real-time satellite data across the whole of the tropics. That is data that you can potentially use in your courtrooms. It is there, but you need the rules to be allowed to use it. That is one of the things that I hope you will discuss amongst yourselves and work out whether there are real, technical, or legal barriers that falsely stop you from having the best evidence you can possibly have.

At the same time, as we were getting excited about satellite imagery, we were also very excited about the global positioning system (GPS). We were going into forests, and we were being able to drive along roads and monitor exactly where that road went. We were accurate within 20 to maybe 50 m, and we thought that was really good. I can now track my daughter to the inch of where she is with the phone in her pocket. Yet, in some of your courtrooms, you are using 120-year-old maps with the distortions and inaccuracies that are inherent within that system. Here is another technology which, over the last 30 years, has rocketed forward and is giving you opportunities.

In 2005, I was at a conference. I was sitting next to this guy who was monitoring the movement of tropical oaks in the last ice age, 20,000 years ago—seeing how far south they came. He was using DNA to do that. We had a discussion, and I said, “That is absolutely fascinating. That is brilliant. But how do we apply it? How do we apply it now?” Within 10 years, we did, and tomorrow, we will have another presentation about the use of DNA in a case where they were able to track where Canadian Maple was felled illegally and used in guitars. It was the DNA, the tracking of the DNA, that was able to do that.

Again, from 2005 to 2016, the speed of change continually geared up. This speed of change creates opportunities for you, but it also creates challenges, and I am aware of that. Citizen science is going to potentially mean that in your courtrooms, there will be more and more valid, well-documented cases with evidence. You have to be able to, in the next 10–15 years, work out how you are going to manage that. All those things that Professor Christina Voigt was saying about the failures of what came out of Rio in 1992—the failures of the biodiversity targets between 2011 and 2020—these are all potential issues that may end up in your courts and on your desks because people are going to get very angry with governments who have failed to live up to their commitments. It is going to be a combination between you and science which will have the power to move that kind of thing forward.

There is lots of science in your courtroom. The coronavirus disease (COVID-19) brought forward the idea of virtual courts. It has brought forward the idea of courts being able to track their procedures much more on apps. Science is just so big a topic. I hope I have been able to give you just a taste of where you might think about going and how you might be thinking about using science.

On Saturday, we will take our ties off and go to my place, a national park, and we will be able to walk around and look at some of this in that kind of context. For now, I am around for the next two days. Come, ask me anything you want, and I will say I do not know, but I will try and help you. Alright, thank you very much.

The Contribution of Public Interest Litigation to Forest Conservation and Protected Area Management



PRAKASH MANI SHARMA

Senior Advocate; Co-Founder and Former Chairman,
Forum for Protection of Public Interest (Pro Public)

Honorable judges, distinguished delegates, and participants, thank you for giving me this opportunity to speak about my experience in the journey of public interest litigation, which I have been doing for 34 years.

As a public interest lawyer, I have personal stories about how public interest litigation has worked as a tool for judges to speak about environmental justice and the conservation of natural resources. Without public interest litigation, I believe that judges would have limited scope to speak about the issues brought before their bench. We also heard from Bill Maynard about forest and science, which might help judges decide cases before them.

In Nepal, before environmental legislation and constitutional provisions were enacted, public interest environmental litigation helped jurisprudence evolve.

Eastern philosophy talks about peace on earth, peace in space, and even peace in vegetation. We are now talking about the forest and protected areas. We need peace in the forest. Our ancestors also understood this need. I would also like to read a few lines of our scriptures, which talk about the importance of trees and plants. “Ten stepwells equal a tank. Ten tanks equal a son. Ten sons equal a tree.” So, how important is it to have a tree for our life? Not only for our life and future generations but for nature too.

I want to talk about a few cases previously discussed by various honorable judges, including our chief guest, the Right Honorable Chief Justice, and the significance of this jurisprudence. I was engaged in the *Godavari* case from 1989.¹ In that case, the court concluded that development is a means, not an end. When we talk about development and the environment, we must remember that development is a means, not an end. So, what is the end? It is nature. The Supreme Court in this case also concluded that the right to life clause of the constitution necessarily includes the right to a clean and healthy environment in which to live that life.

¹ *Surya Prasad Sharma Dhungel vs Godavari Marble Industries and Others*, Supreme Court Writ Petition No. 35 of 2049 Bikram Sambat (B.S.) (1992) (Supreme Court of Nepal, 31 October 1995).

Plenary: Global Panorama of Forest



Drawing from almost four decades of experience, Prakash Mani Sharma speaks about public interest litigation (photo by ADB).

In the second Godavari case, the Supreme Court found that the rule of nature regulates nature and its environment.² Any activity done against those rules may disturb the balance of nature. Every creation or natural object has a natural region and significance. Every object has norms and values. It is unacceptable to dismantle nature's basic terms and values for the sake of vested objectives or financial interests. Air, water, the forest, and biological diversity are interlinked with nature's identity and exist for more than one generation. They should not be allowed to decay under any pretext.

Nobody can claim the freedom to destroy nature's basic form, norms, or constituents in the name of development. The benefits of development activities cannot be compared to the value of nature's gifts. Even if significant benefits are likely to accrue from development opportunities, activities causing a negative impact on nature or environmental destruction should not be allowed to continue. There can be no price for religious and cultural heritage, biological diversity—bugs, insects, butterflies—and vegetation, or the natural beauty of Godavari. Such invaluable natural heritage is worthy of preservation.

In the recent Ambedkar case in 2022, the court observed that the excavation of stone, sand, and gravel may be likened to snatching pieces of flesh and bones from the bodies of mothers,

² *Advocate Prakash Mani Sharma vs Godavari Marble Industries Pvt. Ltd. and Others*, Writ Petition 068-WO-0082 (Supreme Court of Nepal, 16 April 2015).

making it ecocide.³ Thus, we must work together to keep our Himalayas, mountains, rivers, and forest systems clean and healthy. We received nature from our ancestors to hand it over to future generations as trustees. We should not forget intergenerational equity. It is a duty of the state to conserve nature's gifts.

There are many challenges facing public interest lawyers. Ritwick Dutta, an important environmental lawyer, could not join this symposium due to action against him for litigating to protect nature. Pursuing public interest litigation is a very difficult journey for environmental lawyers. So, in a symposium like this, with judges and other stakeholders, it is important to acknowledge the role of public interest litigators and to support them with programs to ensure that public interest litigation continues.

Justice Sapana Pradhan Malla mentioned the 1953 Tinau River case, in which the Nepal Supreme Court was sensitive to environmental protection and sustainable consumption before any such philosophy existed. In another 1953 case, the Supreme Court of Nepal spoke of the importance of the forest. It concluded that if we allow the forest area to be converted into farming land or for human settlements, water resources will diminish, leading to water shortages. So, the Nepal Supreme Court addressed the significance of forests in 1953.

In the Godavari cases, the court treated the right to a healthy environment as an integral part of the right to life.⁴ The cases pre-dated the 2015 constitution, which introduced the constitutional right to a healthy environment. The court also directed the government to enact laws for the protection of the environment, an action that resulted from public interest litigation filed by Dr. Surya Dhungel.⁵

In the *Nijgadh International Airport* case, a petition was filed to stop the cutting of around 10 million trees—although the official count was 2.4 million trees.⁶ Our chief justice discussed that case, which found that the Environmental Impact Assessment (EIA) was faulty and, as a result, the government's decision to build the airport was quashed.

There are many challenges facing public interest lawyers trying to litigate forestry cases. They are harassed and humiliated, and they seek to challenge pro-development government agencies' failures to implement the law.

If you are using public interest litigation to develop environmental jurisprudence and protect forested areas, I propose that it is worth considering how public interest lawyers and judges might work together to protect natural resources and promote nature conservation. Thank you very much.

³ *Shailendra Prasad Ambedkar vs Office of Prime Minister*, Writ No. 077-WC-0099 (Supreme Court of Nepal, 6 June 2021).

⁴ *Surya Prasad Sharma Dhungel vs Godavari Marble Industries and Others Supreme Court*, Writ Petition No. 35 of 2049 B.S. (1992) (Supreme Court of Nepal, 31 October 1995); and *Advocate Prakash Mani Sharma vs Godavari Marble Industries Pvt. Ltd. and Others*, Writ Petition 068-WO-0082 (Supreme Court of Nepal, 16 April 2015).

⁵ *Surya Prasad Sharma Dhungel vs Godavari Marble Industries and Others Supreme Court*, Writ Petition No. 35 of 2049 B.S. (1992) (Supreme Court of Nepal, 31 October 1995).

⁶ *Pro-Public and Senior Advocate Prakash Mani Sharma and Others vs Office of the Prime Minister*, Writ No. 076-WF-0006 (Supreme Court of Nepal, 26 May 2022).

Building Bridges in Legal and Policy Frameworks



BRIONY EALES

Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant), ADB

Honorable justices, judges, policymakers, environmental and forestry officers, and forest custodians welcome to this discussion. It is an honor and a pleasure to be here.

I am focusing on some of the gaps in global and national legal frameworks that Professor Christina Voigt discussed earlier—just teasing them out a bit more because I think that is relevant to what we are doing here as part of this symposium. We need to collectively break down these silos because that is what we need to do to conserve and restore our forests and protected areas and to create 21st-century laws that respond to our 21st-century challenges. Law has always been asked to do that.

So, here is the problem: as Professor Christina Voigt mentioned, there is currently no comprehensive and legally binding treaty to protect forests. We have the United Nations Strategic Plan for Forests of 2030, and it includes a target to increase forest areas by 3% worldwide by 2030. But it is a plan. What that means is that many of the protections for forests sit in other legal instruments.

What I want to talk about today is the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity—as they understand the significance of forests like we all do.¹

For example, between 2001 and 2019, the world's forests sequestered—drew down—twice as much carbon dioxide as they released. But there is only one net zero forest in the world, and that is the Amazon River Basin. In Southeast Asia, the forests have become a collective net source of emissions because we are clearing them, there are uncontrolled fires, and we are draining the peat forests.

So, that is why conserving them is important. We need their protection. We need them to be working with us. Forests are also home to 62% of the global terrestrial vertebrates despite covering only 18% of the world's land area. They are a home to our biodiversity. Unfortunately, as I mentioned earlier, we have these two treaties—the climate change treaty and the biodiversity treaty. They came out of the same convention, the same summit, in 1992. But silos have emerged in how we implement them, and that is because, for too long, lawyers

¹ [United Nations Framework Convention on Climate Change](#), New York, 9 May 1992, United Nations Treaty Series, Vol. 1771, No. 30822, p. 107; [Convention on Biological Diversity](#), Rio de Janeiro, 5 June 1992, United Nations Treaty Series, Vol. 1760, No. 30619, p. 79.

and policymakers saw them as distinct treaties and instruments that needed their own implementation. We did not understand that integrated solutions were really important.

The extent of the siloed nature of these two legal frameworks became apparent in 2020. The Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC), got together to workshop how the two conventions work together. What they found is fascinating. They found that, “current policy and legal regimes addressing climate change and biodiversity crises are disconnected at the international level and national levels, and this is leading to missed opportunities.” Furthermore, they said that both the CBD and the climate change convention tend to lack clear and effective mechanisms to find points of commonality or to explicitly consider the interactions between their domains.

As Professor Voigt mentioned, COP26 finally recognized this and started to think about how we get these interlinkages. This means that although the Paris Agreement is starting to suggest options to members for integrating climate change and biodiversity conservation, it is not explicitly required, in the sense that we say take biodiversity into account. Therefore, nationally determined contributions have not had to specify if and how climate mitigation actions might actually have negative impacts on biodiversity. We have seen examples of how this has happened. Examples such as monoculture forests planted to draw down carbon, but that damages biodiversity. So, we need the two areas to start communicating.



Briony Eales speaks about gaps in global and national legal frameworks (photo by ADB).

Plenary: Global Panorama of Forest

The same happens with the National Adaptation programs. They lack detail about how biodiversity actually helps our climate change goals. A colleague of mine did a survey last year of 43 developing member countries of ADB, just looking at their NDCs and then National Biodiversity Action Plans. This is what we found. Although 75% of NDCs mentioned biodiversity, it is really only in the adaptation context of nature-based solutions. Likewise, 84% of the national biodiversity strategies refer to climate change, but as a driver of biodiversity loss. We need more. This research is not detailed, but what it suggests is that there is no meaningful consideration about the interlinkages and how we can strengthen biodiversity conservation and climate change with these interlinkages and why that is important for forests. We need more than aspirational statements.

As Professor Christina Voigt mentioned, last year's Kunming-Montreal Global Biodiversity Framework created new goals to halt and reverse biodiversity loss by 2050.² There are 23 targets for 2030, including the 30 by 30 target, which calls for protecting 30% of a country's land area and restoring 30% of degraded ecosystems to enhance biodiversity and ecosystem functions.

Policymakers, and I know there are policymakers here, now face the hyper-complex task of creating policies and strategies that incorporate these targets into national systems. Now, I know Nepal only updated its policy and law in 2019, but they already need to be reviewed to understand how we incorporate those targets. We need to ask questions like where will this newly protected land come from? Is that land forests, or is it rangelands? Who is living there? What kind of consultation do we need to do with communities? What kind of benefits can they receive from this land (because just conserving it and cutting it off from people has not really worked in the past)? We need new models. We need new imagination for how it is going to work.

We need whole-of-government approaches, and that is partly what this symposium is about. It is the beginning of a conversation. As Christina Pak mentioned, we need a model forestry law. That is why we need new toolkits to think about this. I mean, if you do not have sweaty palms thinking about how you can make all of this happen, then you are not human. It is tough.

Judges also face unprecedented levels of complexity. They have to detangle how all these webs work. They have to figure out how they clarify the legal and policy frameworks. Despite this, they are uniquely placed to start looking at those interlinkages. I think South Asian judiciaries have some of the best tools available to you and let me tell you why. It is because most of the litigation is constitutional-based rights litigation. In that situation, whether it is a violation, many constitutions in South Asia grant judiciaries extraordinary powers to grant appropriate orders.

So, let me look at some examples. In 2019, Justice Bhattarai penned the decision *Simkhada v. Government of Nepal*, which looked at a government approval for a road project that would divide the Chitwan National Park.³ What makes that decision relevant to this discussion is that

² United Nations Environmental Program, 2022, [Kunming-Montreal Global Biodiversity Framework](#), CBD/COP/DEC/15/4 (19 December 2022).

³ *Ram Chandra Simkhada vs Government of Nepal*, NKP 2019, (2076) Decision No. 10204 (Supreme Court of Nepal, 13 February 2019).

inherent in his consideration, or the court's consideration, is he understood that dividing the park leads to deforestation. It is also one of the last remaining habitats of the Asiatic Rhino and Bengal tigers. It is a UNESCO World Heritage Site and is listed under the Ramsar Convention on Wetlands. These classifications imply that Nepal's ancestors had bequeathed that land to the current generation and Nepal could not harm it. As I said, it is the complexity of issues. It is the understanding of how all of the different pieces come together. So, instead of just considering the case as a land matter or as a road matter, every issue was taken into account.

Another example is a case from Bangladesh. *BELA Vs. Bangladesh*, which is a 2021 decision of the High Court Division of the Supreme Court, in which the court deemed Bangladesh's wetland conservation essential for humankind's survival because wetlands purify water.⁴ Again, the court took into account that Bangladesh is a party to the Ramsar Convention and held that the government is legally obligated to formulate a national policy to protect them in their circumstances. But what is interesting about this case is that the court understood that behavioral change is needed. So, the orders were holistic.

The court recommended shifting Bangladesh to 100% renewable energy to reduce emissions. It also ordered the government to educate the public and judges about the importance of protecting wetlands. It demonstrated the court's awareness that mindsets have to shift to drive awareness and behavioral change. That is what I am talking about when I am talking about climate and biodiversity-conscious lawyering.

We have all heard of the case of *Leghari v. Pakistan*, a very famous climate change case.⁵ What makes that case significant for this discussion about how we bridge gaps and siloes is that the court used its powers to create a climate change commission. That climate change commission was led by experts. It included stakeholders from different sectors who met. It created a forum for cross-pollination of ideas. That is what we need to do if we are going to integrate our solutions. And that is why *Leghari* is such a phenomenal decision in this context.

So, in conclusion, I want to recognize that adjudicating climate change, biodiversity, and forestry matters is sensitive, and it is difficult and challenging.

My parting thoughts are these: all ADB's developing member countries, and that is everyone here, those governments have committed to the goals of the Paris Agreement and the Convention on Biological Diversity.⁶ That is part of their goals. These treaties are operationalized within national legal frameworks. So, consideration of how judiciaries and policymakers can make frameworks cohesive and functional is actually just part of the function of government. It is good governance that is part of the executive and judicial role. As a policymaker, how might you create legal and policy frameworks that incorporate clear reviews, multiparty engagement, and feedback into the system? So, thinking about how does this work? How do we put feedback into the system? How do we get that?

⁴ *Bangladesh Environmental Lawyers Association (BELA) Vs. Bangladesh and others*, Writ of Petition 1683 of 2014 (Supreme Court of Bangladesh).


⁵ *Asghar Legari v. Federation of Pakistan, etc.*, W.P. No. 25501 of 2015 (Supreme Court of Pakistan, 4 September 2015).

⁶ [Paris Agreement](#), Paris, 12 December 2015, United Nations Treaty Series, No. 54113; [Convention on Biological Diversity](#), Rio de Janeiro, 5 June 1992, United Nations Treaty Series, Vol. 1760, No. 30619, p. 79.

Plenary: Global Panorama of Forest

For judges, the next time you are deliberating a matter that touches on forests, biodiversity, or climate change, consider whether the matter might actually benefit from these integrated solutions. Consider what your legal tools are. Each system has its quirks, but you will have your own tools and powers. That might be a continuing mandamus order, asking the government agencies to create policies that are integrated. You are not telling the government what to put in the policy. You are just telling them to create good governance. In 2023, we need the law to respond to society's most pressing challenges. Let us work together so that our children can stand on the shoulders of the work that we are doing and that they are inspired to continue it. It does not stop with us. It must start with us.

Thank you so much.



A wetland in Sylhet, Bangladesh. The Government of Bangladesh has declared three wetlands as Ramsar sites, namely Tanguar Haor, Hakaluki Haor, and Sundarbans (photo by Amit Chowdhury/Unsplash).

Tanguar Haor is Bangladesh's most important freshwater wetland. The area has the last vestiges of a natural swamp forest and provides habitat for at least 135 fish and 208 bird species, including 92 waterbird species and 98 migratory bird species, and including 10 IUCN Red Book and 22 CITES listed species.





5

**REGIONAL
ROUNDTABLE:
Country Reports
on Forest and
Protected Areas
Legislation and
Jurisprudence**

Overview of Regional Roundtable



ALEXANDER HINRICHS

Head of Asia Regional Office, European Forest Institute

Good afternoon. It is a pleasure to be here. My name is Alexander Hinrichs. I work at the European Forest Institute (EFI). I am the Head of EFI's Asia Regional Office based in Malaysia. The EFI deals with bringing science to action, action related to safeguarding and protecting the world's forests. So a lot of what we heard this morning is what we do at our Institute from the forestry side. But I am, like Bill Maynard, a fish out of my usual pond here as I am a forester and not a legal expert. I am really happy to be outside of my pond with you because your area of work is very important. Today's event allows us to better link the forestry side and regulatory side with the judiciary in a way that they can work closely together.

This afternoon's session is called Regional Roundtable: Country Reports of Forest and Protected Areas Legislation and Jurisprudence.

We have three sub-sessions that were already briefly mentioned. The first sub-session is looking into what you have reported about the state of the forest in your respective countries, about national legislation related to forests, and your judiciary and related structures. There has not been the opportunity to present each country report in detail before the symposium and we also do not have time to do this today. The idea today is to provide you with a summary presentation which highlights certain commonalities amongst the different jurisdictions. This will be done by Professor Eeshan Chaturvedi.

Afterwards, Professor Nick Bryner and I will facilitate the first panel which is looking deeper into national legislative frameworks on forests. Once we are through with this panel, the second panel will follow after the refreshment break focusing on the jurisprudence side.

I would like to ask Professor Eeshan Chaturvedi to come in front and present the summaries of the reports from Bangladesh, India, Maldives, Nepal, Pakistan, and Sri Lanka.

Emerging Trends in the Region: A Summary of the Country Reports (Nepal, Bangladesh, India, Maldives, Pakistan, Sri Lanka)



EESHAN CHATURVEDI

Advisor, Global Judicial Institute on the Environment

Your ladyships, lordships, experts, and participants: thank you to everyone who has hosted us. I think today and the coming days should turn out to be very productive, in a holistic manner, as we hope to come up with solutions to one of the major threats to the species.

Before I begin with the country reports, I acknowledge that I am addressing a room full of judges who definitely know more than I do. What we have tried to do with the country reports—and I will take you through the different elements of them—is to give you an insight into the basic, standardized baselines across which we might judge different facets of forest conservation, forest laws, and forest jurisprudence in the countries that are participating in this symposium.

Through this presentation, I will give you a snippet of the trends that have been emerging and have emerged in the past, but also the trends that need to be addressed going forward. We will also continue to work on these specific and substantive country reports, and hopefully, we will be able to apply your opinions and inputs going forward and come up with the best possible output.

I want to start by explaining the baseline we set for the country reports. The sampling matrix looks at the current status of forests of each of the participating countries. We have defined forests inclusively to include mangroves, for example, and we give a status of where we stand currently in each country. In doing so, we have listed the kind of forests that exist, the kind of cover that exists, the importance of these forests, and their interactions with human beings. We have also covered the current threats that forests face in each of these jurisdictions. I would like to thank you for all the responses that we got from the judges of the participating countries because we found incredible information in your responses.

The second thing that we looked at was the status and threats. So, what is the framework that exists currently to address these threats? We cover forest legislation. Within the legislation, we came up with certain pointers that could be spread across the constitution to the ministries, departments, and judiciaries. Because we have the honor and luxury of having some of the brightest minds in the legal field with us, we also included the major precedents—the kinds of case laws that have led us to where we are and the kinds of cases that have been engulfing the forest issues.

Regional Roundtable

With this presentation, I will give you a brief snippet of the reports and emerging trends. I will not cover each country's report in this presentation. That is to be made available later.

Coming to the first set of ideas discussed. Forest areas cover 18% percent of all South Asia's land area. That is almost one-fifth. They are, across the board, rich in biodiversity, rich in wildlife, rich in community attachment, and that is something that stands out when we talk about the region. People associate forests not just as an economic good, moral good, or environmental good, but they associate their identities with forests. That is a theme that has emerged as we drafted these reports.

In terms of threats, we received an incredible number of insights from the responses we received. Overpopulation is an obvious threat. I think that is at the center of a lot of the issues that forests are facing. But so are encroachments. There is a constant struggle between forests and development—infrastructure development and such. There is the human-animal conflict—how do the animals react? There is the wildlife and biodiversity element in forests. We have also observed common themes that have emerged across countries. We have infrastructure development projects and deforestation, forest degradation, lack of adequate skill, and inadequate financial support, in some cases, for the forest departments. Sometimes, they find themselves with too much to do and too few resources, which is a common theme that we have seen. Finally, something that we are all aware of—climate change. Climate change is faced everywhere—across countries across the globe.

Outside of threats, we have identified a panorama of forest legislation, which Justice Benjamin and other speakers mentioned earlier this morning.

The peculiarity of the South Asian region is that it has been able to include forests. There is this inclusive relationship that the judiciaries have developed with forests as they have dealt with cases. One of the biggest outcomes of this relationship has been expanding various rights to include forest conservation. There are specific examples across countries where forest conservation was deemed to be one of the most important rights available to a citizen.

Outside of these expanded constitutional rights, we also have constitutional duties of the state. These have been called directives, principles of state policies, and other names. So, outside the rights-based mechanism, the state, in some cases, is under the duty to protect forests as well. That is another theme that we have noticed across these countries. For example, in the Constitution of Bangladesh under article 18A, the state has a duty to protect, inter alia, the forests of the country. However, these duties of the states are non-enforceable in most countries. So, one could not sue someone for not performing their duty to conserve the forest. However, in recent times, we have observed jurisprudence where non-action or inaction could be deemed sufficient to bring suit against someone.

Let us move to the second part: forest legislation. Specifically, what are the authorities that deal with the forests? Is there a multiplicity of those authorities? Are there just enough authorities? And, within the system, we realize that there are, almost in all cases, extensive frameworks available to deal with forest law, biodiversity issues, and wildlife issues.



Eshan Chaturvedi talks about recent trends in forest legislation in the ASEAN region (photo by ADB).

Indigenous rights and jurisprudence covering indigenous rights is another emerging trend. We have also seen that the Environmental Impact Assessment (EIA) has been a useful tool to face the kind of issues that forests and deforestation are dealing with.

We also have specific felling legislation, one of the most interesting parts of our research. We are seeing provincial, state, and municipal forest felling and timber felling legislation that protects forestation at a local level. So, there are central structures with subordinate structures giving an added line of defense to forests.

Another issue that we hope to get more information on is the roles, duties, and interactions of the departments that are on the ground—the forest authorities, departments of wildlife conservation, and timber cooperatives. There are private sector interests in this group as well. How do these interests converge within themselves to provide a framework on which law could work?

One very interesting facet is the ownership of forests. Typically, in most South Asian regions, forests are either owned by the state or private entities. By private entities, we mean natural or legal persons. But in the case of Nepal, India, and some other countries, we now see ownership being divorced from the management of forests. That is why, in the case of Nepal, we have seen community forests emerging. Community forest groups have also shown us that forest management has improved the situation of forests across the region.

Regional Roundtable

Now, we come to judicial precedents. Incredible work has been done by many judges here. Within the jurisprudential framework, we have tried to classify existing precedents and how they transfer from one court to another and from one jurisdiction to another. In litigation, there is this obvious elephant in the room—whenever there is a forest matter, the issue arises: can I take my case to this court when the tree is not really in my backyard? Does it give me an access to sue? Does it give me *locus standi*? The kinds of cases that have emerged across jurisdictions have been very encouraging. The first issue considered is the definition of forest itself. Is there an inclusive definition of forests? Is forest defined in a way that it covers the varieties that Justice Benjamin referred to earlier in the day?

Finally, the kinds of precedents dealing with ownership and property interests are almost overwhelming. There is such a diversity of outlook towards who owns, manages, has a right, and has a duty of care towards these forests and, in some cases, forest patches. We do not have to imagine 15,000 acres of land. We can also imagine a one-acre plot of land that might be planted with a grouping of indigenous trees. In this case, Justice Bhattarai's judgment was mentioned earlier in the day, so I am not going to repeat it. I have taken a judgment of the Mahaweli Authority that came out in 2010.¹ It is a landmark judgment where a government agency was asked not to fell trees and considered the role that the agency has at the base of its duties and powers.

As said, it is a dynamic document that we are working on. The idea behind this talk was to give you a brief insight into it. Hopefully, in the upcoming sessions, we might use some of that insight to transfer that knowledge into the country reports as we go ahead.

I also want to briefly discuss the kinds of blind spots and traditional innovation avenues that exist, and perhaps we can address them in the coming days. This is an audience that will have views on these issues. So, how do we innovate in terms of procedural law and substantive laws? Not just one, but both. How do we include the right to access equitably to everyone affected by forest violations, deforestation, or the laws that are in place, equity and justice concerns which are self-explanatory? Something we discussed extensively in the last session, and we will keep on discussing, is the creation of science—which I find very intimidating because I am a lawyer for a reason. I am not a scientist for that very reason. Finally, could we have other ways of addressing forest issues in this evolution of jurisprudence to tackle one of the biggest challenges we face today? Thank you.

¹ *Environmental Foundation Ltd. and others vs Mahaweli Authority*, SLR- 1, Vol 1 of 2010 [2010] LKSC 1; (2010) 1 Sri LR 1 (Supreme Court of Sri Lanka, 17 June 2010).

Highlights of Facilitated Panel Discussion and Q&A on the Country Reports

Facilitators:

ALEXANDER HINRICHS

Head of Asia Regional Office, European Forest Institute

NICHOLAS BRYNER

Professor of Law, Louisiana State University

Panelists:

JUDICIAL REPRESENTATIVES

The session delved into gaps in national legal forestry frameworks, along with barriers to and solutions for achieving fairer and more effective implementation of these laws, along with areas to address in a model forestry law. As the discussion included judges, the discussion focused on judicial challenges with implementing forestry and environmental laws, including adjudication challenges. The session was conducted under the Chatham House Rule, so the feedback listed below is not attributed to any person or court.

The discussion identified the following:

- Some environmental public interest litigation results in decisions that are difficult to implement.
- Special legislation for forests is also difficult to implement because judges struggle with access to outdated science, accessing scientifically sound data, or the costly engagement of experts.
- Courts need more ideas from scientists about potential solutions, as they recognize that judges are not the experts in this area.
- Judicial decisions are improved when courts can visit the damaged environmental sites and better understand the solutions for rehabilitation.
- Government policy frequently prioritizes accelerated economic growth at the expense of sustainable development, making it difficult for courts to adjudicate against this backdrop. Further, when it comes to weighing the rights of future generations to the environment and development, courts can be hesitant to explore options that are adverse to development.
- Forestry public interest litigation is primarily technical, so courts with specialized skills in environmental matters are needed (environmental courts).
- Speed is of the essence in adjudicating environmental and forestry matters, and court processes are often too slow. Courts with *suo moto* powers have experienced delays in obtaining technical reports from the government and then reaching a decision.

Regional Roundtable



The panelists discussing the forestry legal frameworks in their countries (photo by ADB).

- Courts need to improve their case management practices for forestry cases, and they need support for this.
- In federal jurisdictions, states can be slow to implement environmental laws, and state and provincial courts need capacity-building.
- Further, it is crucial to ensure that chief justices of provincial courts are sensitized to environmental matters. Otherwise, judges will not take environmental matters seriously or will view decisions that favor the environment as detrimental to their career prospects. Donor support to judicial capacity building at various levels within court systems is recommended.

Highlights of Facilitated Panel Discussion of Recent Cases

Facilitators:

JUSTICE ANTONIO HERMAN BENJAMIN

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

BRIONY EALES

Judicial Capacity Team Leader
for Environmental and Climate Change Law (Consultant), ADB

Panelists:

JUDICIAL REPRESENTATIVES

This session delved into recent litigation involving forests and protected areas, along with barriers to, and solutions for, achieving fairer and more effective litigated outcomes of these matters. The session was conducted under the Chatham House Rule, so the feedback listed below is not attributed to any person or court.

The discussion identified the following:


- Courts are aware that policymakers, lawmakers, and the public perceive environmental protection as regressive for development. So, sustainable development is often poorly understood, and judges see this.
- Environmental matters are frequently handled by courts of lower instances, which lack rules of procedure for environmental matters or adequate judicial and court management training.
- South Asian courts have been active in recognizing eco-centric approaches and the rights of nature based on constitutional, legal, and spiritual traditions.
- Courts must respond to cases run before them. Often, lawyers need training to ensure cases are appropriately framed. Judges described dismissing matters that were poorly framed.
- Courts need access to experts who can brief them on technical matters, such as forestry science.
- Poor implementation of judgments is a significant issue that judges observe in most South Asian jurisdictions, frustrating judges. Courts are often limited to contempt jurisdiction, which has its limitations.
- Implementation of judgments could be improved by monitoring judgment implementation. Law reform could explore how to include judges in enforcement of orders.

Regional Roundtable

- Some jurisdictions are too small to justify creating specialist environmental courts because they do not receive enough environmental law cases.
- Environmental protection agencies must be independent. Regulators are often subject to regulatory capture because heads of the agency are, for example, subject to control by a Minister, limiting regulatory independence.
- Legislators and policymakers need education on the environment and sustainable development. Their decisions can have long-term implications for the environment.
- Environmental education is needed for all judges at all levels of the judiciary, and donor support is needed to fund this capacity building.
- Public participation and education are essential so that people can seek to protect their rights.
- Judges are too often asked to solve problems that go beyond their constitutional remit. Good legislative guidance provides crucial protection for judges because it means that judges can support legislative implementation and avoid allegations of judicial activism or creativity.



The panelists discussing the forestry legal frameworks in their countries (photo by ADB).



Forest in Keylakunu, Maldives. Although Maldives did not suffer any significant reduction of its forest cover since the 1990s, it faces dire sea level rise threats due to global warming (photo by Muhammadh Saamy/Unsplash).

Chitral Gol National Park is a protected area in Pakistan.

It is home to several near threatened and vulnerable species in the IUCN Red List including the Kashmir markhor, Siberian ibex, Ladakh urial, and the Snow leopard (photo by Shafi Rehman/Unsplash).





6

DAY 2
WORKSHOPS:
Intersection
of Forests and
Protected Areas
Science and Law

Recap of Day 1 and Scene Setting for Workshop Sessions on Day 2



HENRY CORNWELL
Counsel, Asian Development Bank

Good morning justices, distinguished guests, custodians of the forest. The Asian Development Bank (ADB) is privileged to have you back on day two of our Regional Symposium on Forests and Protected Areas Legislation and Jurisprudence: Bridging Law and Science. We are grateful to our colleagues at the National Judicial Academy of Nepal (NJA) as well, for co-hosting us here in this beautiful country that is a leading light of forest protection and sustainable development.

Today we will be shifting our perspective from legal overviews to some experiences of those charged with protecting our forests—on the ground, in the field, and in the courtroom. We will explore how courts may better protect these actors and facilitate their work.

But first a brief overview of yesterday's discussions. One of the themes that emerged again and again was the idea that although this conference may be the first of its kind, what we are doing and what we came together to discuss is nothing new. It dates way back to Ashoka, and we are humble custodians of that legacy while using the law to protect our beautiful environment here in this region. So, to go from the ancient to the very modern, we also started exploring—and will continue to do so later today—the power of satellite technology to monitor forests, and how scientific data can be used more often and more effectively in courtrooms.

We also discussed some exciting emerging principles, such as *in dubio pro natura*—the idea that things can change in the forest so irretrievably and so suddenly, and in ways that we cannot possibly anticipate, that it is incumbent upon us as legal practitioners to intervene with swift and decisive remedies. Such remedies should at least stall the process of destruction until further information can be gathered and a scientifically sound management approach can be decided. We also experienced a little bit of debate on issues such as the merits of green benches, which has been incredibly lively and stimulating for those of us coming from a legal perspective and also some discussion of the importance of standing to public interest litigation. And indeed, the role of pleadings, and carefully drafted legal submissions that appropriately capture the science on the ground and translate those issues into courtroom language that will yield the correct remedies. Of course, this draws together so many threads of courtroom practice, of policy, and of judicial practice and reasoning. Also, a call to institutions such as ADB to keep supporting practitioners on the ground and keep delivering these sorts of events that enable these discussions to occur more effectively within and outside the courtroom.



The symposium participants during the scene setting for the workshops on Day 2 of the symposium (photo by ADB).

Of course, the panel discussions and speeches delivered yesterday were just the starting point for more dynamic and stimulating conversations around the dinner table and in the corridors. We hope these will just be the start of wider conversations and a long legacy of stretching higher and deeper into this field.

Homes on the mountainside in Annapurna, Nepal. In addition to being the largest conservation area in Nepal, Annapurna is also home to about 100,000 residents of different cultural and linguistic groups (photo by Giuseppe Mondì/Unsplash).





7

**ACCESS TO
JUSTICE IN
FOREST AND
PROTECTED
AREAS
MATTERS**

Engaging with Court Systems: External Perceptions and Experiences



ALEXANDER HINRICHS

Head of Asia Regional Office, European Forest Institute

Good morning, everybody. Being a forester, I feel really privileged to be in this room, and to talk to you more from the practical side about how to deal with forest crime. In particular, in the countries where I work, illegal logging is a very important issue.

Legal issues related to forestry matters can involve constitutional, administrative, criminal, and civil law. Yesterday, we heard a lot from the constitutional perspective. Today, I would like to focus on the criminal side. The framing question that I hear a lot in my work on the ground is: why are there so few successful prosecutions of illegal logging and forestry crimes, considering we know these illegalities are visible, significant and widespread?

Looking at the legal basis, all your countries have defined regulations and sanctions for breaches of forest laws. If one goes deeper into these regulatory frameworks, however, issues can be identified. There are significant gray zones when it comes to who is handing out what type of permit, who is responsible for the way that logging is approved, what are the obligations for a logging operator, and how are these actually checked? There is some very interesting knowledge gathered from multi-stakeholder processes to review regulatory frameworks and make them more practical and more applicable on the ground.

Another point is the large number of violations. There are about 30,000 violations every year in some of the countries around here, just on issues related to forestry. A huge number of violations have been identified but not many make it into the court system.

Finally, there is also this whole issue of complexity. Illegal logging and related forestry crimes are often linked to other issues, for instance fraud of documents, tax evasion, and money laundering. These may be transnational issues, and there is almost always an underlying issue of corruption that allows illegal logging to happen. We are talking about something which is organized, often transnational, and linked to markets (and these can be both national and international markets).

In this context, the questions I would first like to speak to are: Is there a criminal case? How is the crime identified? How is it detected? Answering these questions requires very detailed information about the land itself, about who has rights, and whether these rights are clearly defined. Are rights, which are not so clearly defined, related to other actors? Clear information is also required on the location itself—often illegal activity on the ground is not easy to

Access to Justice in Forest and Protected Areas Matters

document right away. It may require specialized forestry knowledge, and we must ask: What is this illegal product? What is illegal about this product? Is the species not allowed to be harvested? Is it that certain rules on the diameter of species to be harvested were broken? Is it working in buffer zones?

Then there is the question of whether the complaint is submitted to the right agency. We have already heard about involving other stakeholders in bringing forward information to court. Where are these complaints going to? They usually go first to the local authority and so the question is how to bring them from there into the court system.

Then we have the whole issue of evidence collection. We are talking about something which often happens in remote areas—it is not so easy to access these locations and not so easy to have access to the products. Sometimes these products are moving but they need to be stationary in order to take action.

And then also the whole question of the involved actors—who is responsible, and who should be brought to court? It is easy to identify the chainsaw operators involved in these types of illegal activities, but there is a saying in Southeast Asia: “there is always somebody standing behind.” So how far are you able to go up the chain to get to the people standing behind it and making it happen?



Symposium participants engage in their own discussions on the issues (photo by ADB).

Access to Justice in Forest and Protected Areas Matters

I would like to share a few more personal views on positive experiences. We have seen that countries have advanced on the issue of addressing these illegalities. This includes countries investing in multi-stakeholder forest governance discussions to revisit their frameworks and investing in the court system. But when we are talking about something related to crime, and organized crime, there is also the question of the willingness to bring actions against larger or more influential actors. The more willingness exists, the more possibilities there are for action.

Also, where structures that work independently are in place—independent verification agencies, specialized staff, corruption eradication commissions which have some oversight of the forest sector—that is where more cases can be made, where more access is actually generated.

Lastly, we should not forget that inter-agency collaboration is important. When we talk about the forest, we talk about something which is not completely within the control of the forest agency. Other interests when it comes to illegalities in forests can be mining interests, agricultural interests, development interests, and so forth. We need to remember these are not issues solely within the forester's domain.

I would like to make a special point on the importance of public engagement. From my personal work experience, the involvement of the public in bringing evidence forward is very important—whether from civil society, from individuals, or from independent agencies like certification agencies. Somebody who is on the ground is very important for bringing forward local knowledge, facts, and evidence. Some countries have set up non-compliance platforms under the forestry administration, where issues can be raised. In a way, the government is showing that it is taking responsive actions but the more there is a role for non-government actors, the more one also has to think about how they get protected. That is a huge issue because whistleblowers are definitely under threat.

The next point I want to raise is access to information. To ensure other actors can play a role in monitoring and informing the system, there needs to be transparency and access to information. It is not that easy to access information needed from permits and reports, as well as scientific sources and technologies.

I want to repeat yesterday's point about the importance of capacity building. I would like to broaden capacity building—it has to involve enforcement agencies and also non-government representatives if they are to be part of an effective system. What we are doing today here, sharing lessons, is a very important aspect of this.

Finally, I turn to the question of what legal options might be used. As we heard yesterday, ideally action is taken before there is a problem. When things have happened, what considerations should courts take in terms of actions? When it comes into the verdict, is this limited to the impacts of illegal logging—to take remedial actions with regard to timber which was lost, looking at the economic cost? Or are we going much further, to consider the environmental damage, restoration costs, and even the type of restoration appropriate? One can explore further and even consider whether it is a case of illegal logging that should be addressed through other areas of the law.

Access to Justice in Forest and Protected Areas Matters

Yesterday I also took from your discussions the importance of court decisions being enforceable and applicable. Talking with civil society actors, in particular in Indonesia, one very critical point is that despite court decisions nothing happens on the ground for years. Maybe there could be ways within the way you make decisions that the court retains certain oversight over what happens and works together with the administration afterwards. This links to the idea of defining the remedies to be sufficiently science-based and smart. For example, in Indonesia, the early illegal logging cases did not actually hurt the operators that much because operators were buying back the timber or the machinery later on, and things may be continued under a different company name. This highlights the importance of focusing not just on the decision itself, but also on oversight and involving the public in what happens after a decision has been made.

Thank you, this I the end of what I wanted to share with you, thank you very much.

Court User Experiences – Summary of facilitated panel discussion involving perspectives of:

- Government Investigator, Enforcement Agency or Expert Witness
- Environmental Lawyer
- Community Member or NGO Representative

Facilitator:

HARJ NARULLA

Barrister

Panelists:

PADAM BAHADUR SHRESTHA

Advocate; President, Environmental Law Society Nepal

RUPERT STUART-SMITH

Research Associate in Climate Science and the Law,
Oxford Sustainable Law Programme

SHIBANI GHOSH

Lawyer

ALEXANDER HINRICHS

Head of Asia Regional Office, European Forest Institute

The panel discussed various topics of interest to court users, including:

- the main barriers to accessing justice in forest cases, and environmental litigation more generally;
- improving community awareness about both forest laws and their legal rights, and the role lawyers, judges and civil society organizations can play in this regard;
- the role of scientists and other expert witnesses in the preparation of evidence for effective litigation, and in advising courts on technical matters;
- the role of scientists and experts in engaging with communities; and
- the use of traditional knowledge and ways of relating to forests in building cases and monitoring implementation.

Access to Justice in Forest and Protected Areas Matters

Key points that emerged from the discussion included the following:¹

Awareness

- Despite long-standing laws, deforestation, forest fires, and similar issues remain prevalent in many rural areas. If we do not internalize the importance of the environment and the forests, we cannot safeguard the forest for the next generation.
- In general, communities are unaware about legal systems, and how to access them. People affected by cases often live far from government offices and judiciaries and have limited means of communication.
- In India, exemplary work is done by the legal aid of the High Court in labor rights and prisoner rights. The legal aid movement is so widespread and so strong, going down to every district of the country, which provides a model to explore for environmental cases.
- Civil society organizations and development partners can play a bridging role, providing information to communities about the regulatory framework and legal systems, and helping set up systems for communities to access information.
- People and communities often do not know their legal rights and options. They do not know which forums they can access. Often there are administrative redress mechanisms that they can approach before engaging in the judicial process.

Access to Information

- Lack of information, as well as information asymmetry between communities and regulatory agencies, is a hindrance to access to justice.
- There is a need to strengthen the capacity of each individual when it comes to access to information about the environment and their rights regarding the environment.
- Access to information supports environmental human rights defenders and enhances their safety. Collecting evidence can be very challenging, and there are instances of people risking harm while doing so. Ensuring that basic data is available through regulatory agencies' web portals would enhance transparency and public access.

Access to Expertise

- An inability to access expertise—whether legal, scientific, or technical—can hinder making a good case.
- Lack of access may be due to different factors such as expense and geographic location.
- Some judgments in environmental cases may not be appropriate or effective because the judge does not have access to the knowledge or opinion of experts.

¹ The session was conducted under the Chatham House Rule, so the feedback listed is not attributed to any person or court.

Access to Justice in Forest and Protected Areas Matters

Conflicting Interests

- Often, there are competing rights involved in forest matters. For instance, the right to livelihood or socio-economic development of the poor and vulnerable communities must be balanced against both environmental objectives and the rights of the private sector. Often the communities are at the losing end, effectively limiting their access to justice.
- When concerns about negative impacts on the environment relate to significant development projects, judges may be more hesitant to intervene.
- Similarly, environmental litigation appears to some as a direct hindrance to the developmental process.
- This is also linked to safety issues where public interest lawyers and other advocates have been accused of being anti-development.

Safety

- Journalists, advocates, and communities are facing increasingly significant pressures and threats to their safety.
- Some people are concerned for their safety when they file environmental cases. There is a need to reassure people that their safety will not be compromised when they raise public interest matters.
- Evidence collection at the community level can be difficult because of security concerns for those who want to protect the forests. This may be especially true when government agencies are involved and/or have to be informed about the complaint. For instance, in a case involving air pollution in Lalitpur, the people were so afraid that they disguised themselves as journalists in order to secure evidence.

Procedural Complexity

- The administrative procedures for environmental law cases can be lengthy, complex, and time-consuming. This can present challenges for time-sensitive threats to forests and for communities with limited resources.
- Green benches may be needed so that courts can specialize, deliver appropriate judgments, and be accessible to the people.
- Fast-track procedures or specialized environmental procedures should be considered. Such procedures are common in gender-based violence, family law, and commercial law cases, and may be warranted for an environmental case.

Public Interest Law Cases

- Public interest cases (including, but not exclusively, environmental cases) can take a considerable amount of a court's time. For instance, around 20 to 25% of the thousands of cases at the Supreme Court of Nepal are public interest matters.

Access to Justice in Forest and Protected Areas Matters

- Often, some of the issues could be clarified if the public interest lawyers engage with the government first, but sometimes public interest cases are used for publicity or political interests.
- At the same time, we cannot treat public interest litigation in the same way we treat the collection of debts. We need to look at the whole system (including standing to sue, costs, burden of proof, and remedies) with respect to public interest litigation.

Community Knowledge, Expertise, and Partnerships

- Recognizing the diverse forms of knowledge, particularly the valuable insights held by communities, is crucial.
- Often, experts do not have access to this repository of important information. This is another perspective on the need for greater community awareness around their rights.
- The legal and scientific communities should use creative and innovative approaches to synthesize various strands of knowledge, and to strategically utilize complementary sources of knowledge and expertise.




The panelists speaking on court user experiences. Seated from left to right, Harj Narulla, Bill Maynard, and Padam Bahadur Shrestha. On screen are Rupert Stuart-Smith and Shibani Ghosh (photo by ADB).

Access to Justice in Forest and Protected Areas Matters


- For instance, in regions where historical data is lacking, communities may possess critical information about aspects like forest cover or ecosystem changes. This community knowledge, when combined with scientific expertise, can create a comprehensive understanding of the situation.
- Community knowledge regarding forest conservation has deep historical roots. For example, in Nepal there is a cultural tradition of revering and managing forests, abstaining from tree felling, and preserving them for worship. This knowledge should be harnessed for effective forest conservation and documented within legal frameworks, potentially forming a strong foundation for preservation efforts.
- Governments can also make use of community expertise to support environmental governance. For example, the United States Environmental Protection Agency recognized that it did not have the resources for comprehensive environmental monitoring and needed public involvement.

Role of Scientists and Other Experts

- Scientists and other experts have three primary roles in legal settings:
 - (1) They are responsible for translating the existing scientific research into a comprehensible and equitable format.
 - (2) They must synthesize various scientific evidence and research findings from different sources into a cohesive understanding. This involves combining diverse research to determine the most robust available evidence on a given topic.
 - (3) Scientists in the legal context also contribute by generating fresh insights and answers to questions that may not have been addressed previously. This is particularly relevant in cases related to climate change and forestry, where novel questions demand scientific input to provide relevant answers.
- Scientific insight can be given through expert reports, testimonies, amicus briefs, advice to litigants, and independent research, all of which contribute to framing cases and aiding judicial decisions.
- The interaction between scientific and legal activities is crucial, ensuring that information is accessible to both the communities initiating cases and the judicial decision makers. This enables informed legal decisions grounded in the most robust scientific evidence available.
- While the ideal scenario involves impartial scientists, reality often presents situations where different scientists may hold varying perspectives due to their backgrounds. Therefore, the scientific community plays a role in identifying the most credible experts.
- Since independent expertise may often not be readily accessible, judges should be supported to differentiate between conflicting scientific viewpoints and understand the issues at hand for informed judicial decisions.



Forest in Patriata, Pakistan. Pakistan is groundbreaking in its environmental jurisprudence. For instance, in *D.G. Khan v. Government of Punjab*, the Supreme Court said that "[m]an and his environment each need to compromise for the better of both and this peaceful co-existence requires that the law treats environmental objects as holders of legal rights" (photo by Moosa Baloch/Unsplash).

A photograph of a dense forest with tall, slender trees and a dirt path leading through the woods. The trees have green foliage, and the path is covered with fallen leaves. The sky is visible through the canopy.

Lawachara National Park is a major national park and nature reserve in Bangladesh. It covers approximately 1,250 ha (12.5 km²) of semi-evergreen forests biome and mixed deciduous forests biome. The land was declared a national park by the Bangladesh government on 7 July 1996 under the Wildlife Act of 1974 (photo by Saief Al Emon/Unsplash.)



8

**COMMUNITY
INTERESTS IN
FORESTS AND
PROTECTED
AREAS**

Supreme Court of the Philippines and Community Law Clinics



JUSTICE MARIA FILOMENA D. SINGH
Supreme Court of the Philippines

I am going to speak about community law clinics in the Philippines. This topic is very close to my heart because I have been very active in the setting up and the operations of the law clinics in the 127 law schools in our country. The conversation about this started a while back, but this was only made mandatory this year. I will give an overview of how we revised the practice rules, and then I will give you some environmental information on the Philippines. Then I will talk about a few specific law clinics and how they have specialized in environmental justice. Finally, I will give my conclusions.

First, the Revised Law Student Practice Rule. I mentioned this in Oslo last year in October.¹ There I said that the judiciary cannot stand still just waiting for cases to come before them and then, once the cases are finished, think that their job is over. That is not what we are called to do in this day and time, especially in the face of this crisis. In the Philippines, the Supreme Court has been leading reform progress towards environmental justice. One of the most fundamental or core programs that we have is what we call the Revised Law Student Practice Rule. We revised the law student practice rule, to make law clinics mandatory in all law schools in our country.

In the Clinical Legal Education Program (CLEP) under the revised rules, we mandated the inclusion of two courses in the law curriculum that all students must take up before they are allowed to graduate from law school. This has a dual purpose. On the side of the student, it is additional training. On the side of the school and the institutions, and the country in general, it is part of developing the next cadre of environmental protection advocates. This is the first year that we made this mandatory. With the Revised Law Student Practice Rules, all the law schools in the country have started setting up legal clinics. Some have had clinics for a while but there are very few of them. Most of them are just starting out now. So that became our challenge. But that also opened the doors for us to train and direct some of them to take up the cause for environmental law. At present, 118 of our law schools are offering clinical legal education and free legal assistance.

¹ Oslo International Environmental Law Conference, 3-6 October 2022, see <https://www.iucnwcel2022.com/>

Community Interests in Forests and Protected Areas

In the next slides, I will show some environmental information on the Philippines. First, our protected areas total 5.13 million hectares out of a total of 30 million hectares land area. On the screen you see the Northern Sierra Madre Natural Park which is home to 1,079 species of trees.

Environmental Information on the Philippines

- Protected areas - 5.13 million hectares (out of 30 million hectares total land area)

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines



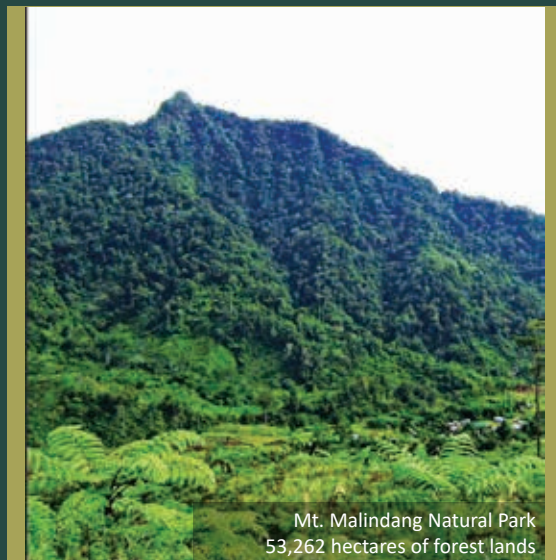
The Northern Sierra Madre Natural Park
Home to 1,079 species of trees

Our forest cover is 7.01 million hectares. On the screen is a picture of the Mount Malindang Natural Park which consists of 53,262 hectares of protected forest lands.

Environmental Information on the Philippines

- Forest cover of 7.01 million hectares

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines



Mt. Malindang Natural Park
53,262 hectares of forest lands

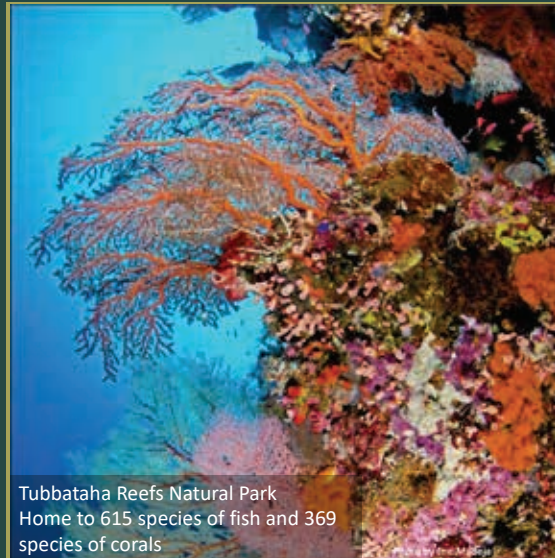
Community Interests in Forests and Protected Areas

We have 797,814 hectares of corals. Most of you are probably familiar with Tubbataha Reef Natural Park which is right in the middle of the sea of Sulu and is home to 615 species of fish and 369 species of corals.

Environmental Information on the Philippines

- 797,814 hectares of corals

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines



Tubbataha Reefs Natural Park
Home to 615 species of fish and 369 species of corals

We have 303,521 hectares of mangroves in the Philippines. On the screen is the Sagay Marine Reserve, home to 33 species of true mangrove and 10 mangrove-associated species.

Environmental Information on the Philippines

- 303,521 hectares of mangroves

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines



Sagay Marine Reserve
Home to 33 species of true mangroves and 10 mangrove associate species

Community Interests in Forests and Protected Areas

There are approximately 22,377 known fauna. On the screen is the famous Philippine Eagle. We have 11,138-plus known flora.

Environmental Information on the Philippines

- Known fauna - 22,377+

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines

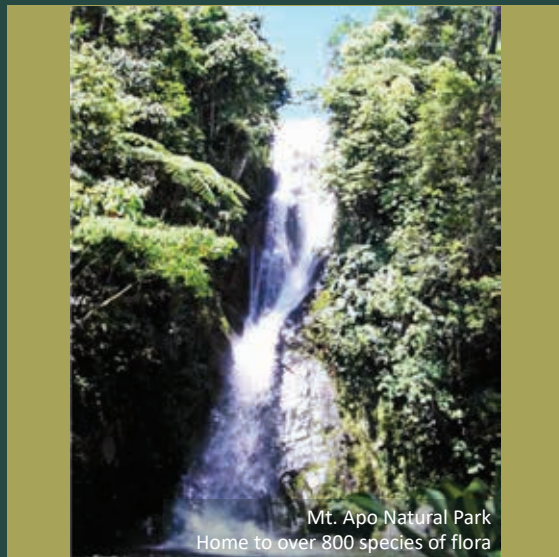


What you see is the Mount Apo Natural Park which is home to over 800 species of flora.

Environmental Information on the Philippines

- Known flora - 11,138+

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines



Amidst this natural beauty we face a myriad of environmental issues every day, as you see from this collage of headlines. Naturally the establishment of law clinics across the country will bring greater access to environmental assistance in terms of environmental justice to more of our people.

Community Interests in Forests and Protected Areas

I want to share specific actions, concrete actions, taken by three of our law clinics. I chose three from the three major island groups in the country: Luzon; the Visayas; and Mindanao. The first is from the University of Cebu School of Law's Green Legal Aid Clinic. They call their legal clinic Green Legal Aid Clinic. Cebu is the second most populated province in the country. It is also the second largest province in the Central Visayas region. Despite the landmass of the province, there are still many reclamation projects there where they keep on reclaiming land from the sea and building commercial establishments, condominiums, etcetera on them.

One of the big achievements of the Green Legal Aid Clinic of the University of Cebu is the establishment of what they call the Citizen Scorecard on Reclamation. This gives the public access to a forum to air their observations, opposition, and objections to the projects reclaiming parts of the seas surrounding the island of Cebu.

We also have a rule on Strategic Lawsuits Against Public Participation (SLAPP suits) under Rule 6 of our Rules of Procedure on Environmental Cases, which was used when a cyber libel complaint was filed against an advocate who had published, on social media, criticisms of a quarrying operation near her residence. Due to these posts on social media, a cyber libel complaint was filed against her. This was a criminal case. As a defense, she was able to invoke the SLAPP rule. For this reason, the cyber libel complaint was dismissed.

This same clinic in Cebu conducted river summits in 2021 and 2022 where emerging climate issues affecting rivers of Cebu were discussed. It also launched a zero plastics campaign across all seven law school campuses in the province. This campaign was uniformly adopted to eradicate single use plastics in their campuses.

Finally, but very importantly, the clinic has participated in the formulation of the Mandaue City Environmental Code in partnership with a local government. The law student practitioners have been engaged by the local legislators in the formulation of the Environmental Code.

The University of Cebu's Green Legal Aid Clinic trained police officers. Unlike Nepal and other countries where you have rangers, the enforcement side of our Forestry Code, is undertaken by our local police officers who hardly have any training on environmental law. The clinic was able to open the eyes of our police officers to why particular offenses are punished. Once you explain to them the reason behind the law, why these acts are being punished, the operational side becomes easier for them because they see the purpose for their actions. They become advocates as well because now they understand why they are performing these actions.

Now I highlight the activities of Ateneo de Naga University, which is on the island of Luzon. Naga is situated in our country's typhoon path. Every year, an average of 21 typhoons cross the Philippines, seven of which will directly hit Naga City. In 2020 alone, because of these typhoons, Naga suffered 21 billion pesos in damages. The Naga legal clinic was able to oppose the cutting down of 70-plus old trees for the purpose of widening the main thoroughfare, which is a tourist attraction in the city. The road was going to be widened, to install more lights and more park benches, but the result was going to be the cutting down of 71 trees. The legal clinic there had opposed the cutting down of the trees and, together with the community base, was able to negotiate an alternative. Finally, a resolution was adopted by the local legislature

Community Interests in Forests and Protected Areas

which decreed the incorporation of the trees in the new plan for the widening of the main thoroughfare.

The law clinic also developed the environmental policy tracker for national and local elections. The idea was that every candidate should have an environmental policy and that the voters' minds are opened to whether a particular candidate is worthy of support based on the environmental policy advocacy of each candidate. This was used in the last 2022 elections. The clinic also produced infographics on environmental laws and ordinances because a good deal of noncompliance is a result of lack of information or misunderstanding. The public simply does not understand that there are laws that require or prohibit certain things. More infographics gave them a higher consciousness of what can and cannot be done under the environmental laws and ordinances in the city where they live.

The Ateneo de Naga Legal Clinic was also hired as a consultant by the local Solid Waste Management Board of the city. And as I mentioned, in capacity building, they visited the barangays so that they could distribute informational materials.

Finally, in Mindanao, the Xavier University College of Law calls their law clinic “R3” for ridge, river and reef. This is because its main aim is to protect, preserve, and enhance the ecosystem in the ridge, river, and reef continuum. The landscape in the area involves both lowlands and mountain ranges and so whatever happens in the uplands will have an effect on the lowlands ecosystems. Some of the accomplishments of Xavier University College of Law are paralegal training for the Bantay Dagat (or the “Protect the Sea”) advocates and the Bantay Gubat (or “Protect the Forest”) advocates to help preserve the Cagayan de Oro river basin and the preparation of implementing rules and regulations for the payment for ecosystem services. This is the first of its kind in the country and was undertaken in partnership with indigenous peoples in the mountains of Bukidnon. The idea was to engage the indigenous communities and to recognize the investment of their time in the preservation of natural resources. The payment for ecosystem services—including water, air, and forest preservation—is now found in a municipal ordinance in Bukidnon.

In conclusion, through CLEP, law students can become instrumental in promoting environmental justice. CLEP also brings law students face to face with the problems of access, exposes them to public interest work, and raises their consciousness as to the existence of less explored fields of law such as environmental law. We believe that we must start the work early by doing this in our law schools. We cannot wait for them to become practicing lawyers for them to develop this kind of interest and this kind of advocacy. This is the reason why we felt that through clinical legal education, we will be able to accomplish both purposes at the same time.

Community Consultation and Rights to Forests in Nepal¹



BHARATI KUMARI PATHAK

Chairperson, Federation of Community Forestry Users Nepal

Bharati Kumari Pathak started her journey in community forestry at the age of 15. Over 26 years, she has served as a community forest activist, gaining valuable insights from her involvement in the conservation and management of community forests.

A forest is not merely a physical expanse of trees but the entire spectrum of natural resources. The concept of community forests helps ensure the sustainability of well-preserved forests.

The concept of community forests has evolved from the fundamental idea that forest conservation and management is not the responsibility of a single individual, but the collective duty of an entire community. This shared responsibility encompasses the protection not only of forests but also water resources, lands, and every aspect of nature. In this context, community forest management emerges as a crucial model, with approximately 2.2 million hectares of land being overseen by community forest initiatives. Furthermore, around 2 million households are affiliated with community forests, and government data indicates the existence of 24,000 such forests actively managed and supported by communities. The protection of forests cannot rely solely on one person or entity—the entire community must be involved in the process.

Examining Nepal's community forests dating back to 2015, the significant role women play is evident. They have direct connections with natural resources and hold leadership positions in managing community forests. Indigenous communities also play a key role in forest protection.

The Federation of Community Forestry Users Nepal (FECOFUN) introduced a 15-day community forest education program in Myanmar. The people from Myanmar were eager to adopt the model implemented in Nepal. FECOFUN also endeavors to share its knowledge through platforms like the international community forest learning center. A community forest convention is also underway, involving 545 municipalities, and mobilizing more than 4 million community leaders, with 900,000 people actively engaged in forest conservation through community management. The organization has become a platform for raising voices in support of forest conservation and intends to continue promoting these conversations.

¹ Summary based on the translation of Ms. Pathak's presentation.

Community Interests in Forests and Protected Areas



Bharati Kumari Pathak speaks of her experiences as a forest community activist for almost 3 decades (photo by ADB).

Community groups have actively contributed to forest conservation efforts over the past 25 years. Working on a voluntary basis is not sustainable, however, and resources derived from the forest should benefit the community to ensure viability. The goal is to connect these resources to the livelihoods and productivity of the people, for sustainable conservation efforts.

The federalization of the government has affected community forest rights, particularly due to changes at the local government level. The Forest Act allowed the community forest users to form groups and resulted in good outcomes. However, forest laws introduced at the local level have posed some challenges to communities, and their access and ownership rights.

There are also other challenges including security concerns and gender-based violence. Lack of policy implementation, political instability, and political interventions also make it hard to continue with goals and objectives of community forest organizations.

In closing, Nepal's community forests can have a significant contribution to conservation. What is necessary is for people to recognize this and provide financial and other forms of support so that the challenges could be overcome.

Forest Governance and Community Engagement in Nepal



DR. YAM MALLA
Forest Governance Consultant

I would like to thank the organizers for inviting me to share my experiences and also giving me the opportunity to learn from the judges through yesterday's discussion.

I am not used to being among lawyers and judges and the courts. I am used to interacting with forest officers, and the villagers, for which I really had to spend a lot of time learning how to communicate with them. Maybe now I have to learn how to communicate with the lawyers and judges.

When elders used to give me blessings, they used to tell me: “may you not have to be involved with the police, may you not have to be admitted to the hospital, and may you not get involved with lawyers, judges and the court.” That is the normal perception in Nepalese society. When I started working in forests, they used to tell me not to be associated with forestry and forestry officials. Basically, try to keep your distance from the officials because they catch people and put them in jail. That was our position 30 to 40 years ago. However, over time, we learned how to communicate, how to bring the foresters and businesses together and interact with each other. We learned to try to find out what the problem is, together. That is why local people have been able to contribute so much to reversing the forest degradation in Nepal. All the South Asian countries have been doing social forestry and community forestry for the last 20 to 30 years—joint forest management in India, social forestry in Bangladesh and Pakistan, and community forestry in Sri Lanka, and Ms. Bharati just mentioned that she went to Myanmar to share experiences.

I would like to start with three or four key messages. One of these is the evidence of why community forestry has been so successful. I will not go into detail on this because Ms. Bharati already covered this point. The second key message is the evidence of why community forestry has been able to reverse the forest degradation process. Again, I think Ms. Bharati has already explained that and I will not get into much detail. The third is the challenges that Nepal's community forestry faces. Ms. Bharati explained some of these, but I would like to get into more detail on the kind of challenges and the reasons they exist. The final message is to consider what is next for community forestry in Nepal.

Nepal has recently adopted a federal system. Nepal used to have a unitary system of governance. Now it has three spheres of government that are more or less autonomous. The Constitution expresses some specific rights of these three levels of government, but there are also concurrent or shared rights where they cannot act independently.

Community Interests in Forests and Protected Areas

The Forest Act was passed in 2019, and has presented a lot of challenges for the provincial governments and local governments. For example, the federal government has been acting independently on some of the areas which should be undertaken in consultation with the provincial government and local government. This undermines the rights of provincial and local governments, which has caused tension between the provincial governments and the federal government. In fact, one of the provinces filed a case against the federal government in the Supreme Court.

Even though Nepal has developed a federal system of governance, there has been a tendency to follow the old system of governing the forests, causing a lot of tension.

The federal Forestry Act also caused a lot of tension in the functioning of the local government. Most of the forests are located in the local government jurisdictions. But then, the federal Forestry Act continues to assert pressure or control over the local forest resources. This has to be carefully planned and managed. There has also been tension between community forest user groups and the local government. Local governments say that community forest groups are part of us, they cannot act independently. But community forest user groups are autonomous, and they would like to act independently.

One of the reasons why community forestry expanded very rapidly during the period of armed conflict from 1996 to 2006 is that community forestry organizations were the only institutions in Nepal that functioned effectively. This shows that they are socially viable, socially robust institutions.

Now, a couple of points on the rationale for community forest. In 1957, the national government nationalized all the country's forest resources. It took away the access rights and user rights of local communities and placed management responsibility in the forest department. And what was the result over the next 20 years? There was widespread deforestation because local communities did not collaborate with that kind of government policy.

After this, foresters started to realize that it is almost impossible to reverse forest degradation on their own, without the local people's active participation. As a result, the government developed community forestry policy, rules and regulations. Then they started engaging local people. Then the forest resources started to regenerate, revegetate, and come back.

As a result of having the right kind of policy and approach to forest governance, it was possible to recover the lost forest resources in 20 years. The amount of forest that has been recovered as a result of the contribution and collaboration with local people is phenomenal. This may be attributed to the recognition of the access and use rights of local people in Nepal. The Nepal Government, particularly the Forest Department, realized that there had been widespread indigenous management systems, but that these had been ignored. They then started to frame the community forest program around those access and user rights and recognizing human rights. Then local people saw that the program is relevant to them and addressed their needs.

Now let me talk about what is happening on the ground. Over the last 10 or 15 years, community forests have been slowing down. There is a reason for that. The government

Community Interests in Forests and Protected Areas

has been introducing policies to generate revenue to run its administration. Somehow community forestry is not providing that kind of revenue that the government wants to have. The government has also been investing money in road infrastructure and rapid urbanization. There is also a government policy of encouraging foreign employment to earn money and send remittances here, so that these can be taxed. It led to a huge amount of migration among rural people, mainly active men and women, to urban centers and foreign countries. That demographic outflux is causing a shortage of labor in farming, declining interest in farming, abandoning of farmland, decreasing farm animal numbers, and declining interest in forest governance and community forests. This has been happening very rapidly.

Now I turn to the current situation of community forest. I would like to share some findings from my field observations. Most rural houses no longer depend on community forests to support their farmland and household needs. They are shifting from animal dung to fertilizer, from oxen to tractors, and from firewood to LPG. They no longer depend so much on forests. Houses no longer depend on agriculture and forestry for most of their income. Income is from remittances and off-farm employment. Rural houses now have multiple diverse sources of income. They have enough trees on their farmland to meet their forest product needs. There is declining interest in being involved in community forestry activities.

Active members who previously played a lead role in promoting community forestry have now moved to cities and joined political parties. The remaining aged men and women, and poor household members, have neither the capacity nor interest to steward their community forests. Most community forestry user groups reported that they had not held committee meetings or general assembly meetings for years. Many do not even remember when they last visited their community forest to collect forest products. In other words, the community forestry program seems to be losing its relevance very rapidly to many of these rural households.

This is a big challenge for the government, for the forest department, for the community forest user groups, and their organizers like FECOFUN. What should be the next strategy to make community forestry thrive? Community forestry has evolved as a robust community-based natural resource management institution, with legally supported devolution of forest rights to local communities. It has been very successful in reversing forest degradation and providing benefits for household needs.

Community forestry institutions demonstrated how the principles of democratic governance can be applied practically in the governance of community forests, and the community forest user groups. These are now facing new challenges in the changed context. Poor and marginalized households were unable to benefit as much as other households from the community forest program and, possibly, may have been further marginalized. The nexus between forest officials and the timber contractors in the sale and transport of forest products from both community and private forests disadvantages the state, private forest owners and community forest user groups (especially the poorer household members).

Overall, in addition to reversing the forest degradation trend, community forestry institutions have been very successful in building social, institutional, and natural resource foundations. However, they have failed to promote active community forest management, create market-oriented benefits, or contribute to improved livelihoods and social equity for the overall village, rural and national economies.

Highlights of Q&A with Presenters

Facilitator:

MARTIN COSIER

Environment and Climate Change Law Specialist (Consultant), ADB

In the context of presentations that revealed the incredible history, experience, and lessons derived by the speakers, the panel discussed the question of what comes next for community engagement in forest conservation. In particular, the panel considered the approach needed to achieve global biodiversity conservation and forest reforestation targets, and how the pursuit of these targets and implementation of governance regimes can involve, and benefit, communities.

The speakers were also asked about dealing with possible conflicts between community forest groups and national park authorities, whether funds gathered from community forests go to their preservation or to specific persons, and what enabled women to become leaders in community forest groups.

One key suggestion was to not fear the challenges. There have always been pressing challenges, but solutions have always been found. In the 1950s, when the government took usage rights away from the communities, it created a lot of problems and challenges. Yet, this pushed



Martin Cosier facilitates the question-and-answer with the panelists, Bharati Pathak, Dr. Yam Malla, and Justice Filomena Singh (photo by ADB).

Community Interests in Forests and Protected Areas



A participant asks the presenters a question (photo by ADB).

the Nepal government to reflect on the problems in the policies and listen to communities. The government then started to formulate community forestry policies. Now, we face a different set of problems and challenges, but we should not be afraid. We should talk to each other, consult, and try to see the way forward.

Despite policies promoting women's participation, effective implementation remains a concern. For instance, during the drafting of the Forest Act, it was a struggle to have women's presence in community forestry acknowledged. Some regulations lack alignment with constitutional provisions. Some provisions appear contradictory and fail to support community approaches adequately. Additionally, there are conflicts and security issues related to land use and wildlife near national parks, impacting the livelihoods of local communities, particularly women involved in the collection of forest products. Legal challenges can also hinder opportunities, especially for women, as the proceedings are often time-consuming.

Governments and relevant authorities need to address these issues, ensure human rights, and create environment-friendly solutions to prevent future conflicts in sensitive areas like community forests.


Community Interests in Forests and Protected Areas



Dr. Yam Malla responds to the questions from the participants (photo by ADB).

Emphasis was placed on the importance of dialogue, bringing different groups of stakeholders and leadership groups together. Dialogue is fundamental to addressing the challenges with which we are all so intimate, and to collaboratively and creatively considering questions such as:

- How do we expand the ideas that are available to us to explore different governance systems?
- How do we think about a more integrated approach to forest management and forest governance that involves communities and various stakeholders?
- What is the role of the education system in more broadly supporting awareness raising and empowering the people that need protection in order to be the guardians of the forest and the custodians of the forest?

A photograph of a chain bridge spanning a deep valley. The bridge is made of metal grating and is supported by thick cables. The surrounding landscape is a dense forest of green and brown trees, with a large, forested mountain peak in the background under a blue sky with some clouds. A small blue-roofed building is visible on a hillside to the right of the bridge.

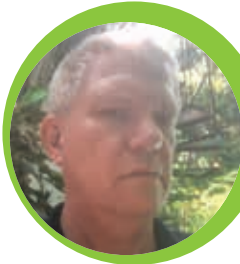
Chain bridge near the Annapurna Conservation Area.
The Annapurna Conservation Area is rich in biodiversity, with 1,226 species of flowering plants, 105 mammals, 518 birds, 40 reptiles, and 23 amphibians (photo by March Linnemann/Unsplash).



9

**SCIENCE AND
INNOVATIONS
IN FOREST
PROTECTION AND
MANAGEMENT**

Science and Technology: Opportunities for Forest Management



BILL MAYNARD
Forestry Practitioner

Bill Maynard opened the session by expressing his fascination with the discussions about what judges can and cannot do in responding to threats to forests. In particular, he recognized that judges can only consider the cases brought to court and the experience from the Maldives, where the only three environmental cases that had been brought had all failed because of the quality of the drafting and argument of the case.

In this context, Mr. Maynard considered that some participants might be interested in how science could improve the quality of cases brought to court. He noted that after speaking on the first day of the symposium, he was challenged by one of the delegates from India about what science could offer for the specific situation of the Western Ghats, where there are 13 national parks and conservation areas and 358 endemic species across 160,000 square kilometers. Scientists or forest managers can break these very complex scenarios down into different problems and devise appropriate management plans, but then the next logical step is to say that other parties need to enforce these plans.

Mr. Maynard then introduced the three presentations on innovative science and technologies that provide examples of the types of information and tools that might be able to be used to support improved forest conservation outcomes:

- [DNA Mapping, Darren Thomas, Double Helix Tracking Technologies](#)
- [Forest Monitoring, Global Forest Watch, World Resources Institute](#)
- [Bio-acoustic Monitoring, Rainforest Connection](#)
- [Drone-based Aerial Mapping, Nepal Flying Labs](#)



Bill Maynard talks about science and technology and their usefulness in forest management, as well as in environmental litigation (photo by ADB).

Managing Satellite and Other Data Evidence



JUSTICE RACHEL PEPPER

Land and Environment Court of New South Wales

Thank you very much, Bill, and thank you to the ADB for inviting me to speak.

I first want to acknowledge the country on which I am located, the Wandj Wandj (Yuin) nation. I pay my respects to the elders past and present, and I acknowledge the presence of any First Nations people that are here watching me today.

The second thing that I wanted to say, by way of introduction, is that this is an adaptation of a much longer presentation given by the head of my jurisdiction, Chief Judge Justice Brian J. Preston, in 2022. So, all of the good work is his but all mistakes are mine.

The third thing I want to remind people of is that I am a judge, not a scientist. But I will be talking about some scientific techniques today.

We all know what remote sensing is—it is the science and technology by which properties of specified objects, areas or phenomena can be identified, measured and analyzed without direct contact in order to make useful decisions about what they are depicting.

There are three major platforms of remote sensing. There is ground level or sea level platforms, such as towers and cranes, sonar and ocean mapping, attached to boats or watercraft. There is, probably more relevant here today, aerial platforms such as low altitude aircraft, or higher altitude aircraft, drones, fixed-wing aircraft, and so on. Then there is, of course, spaceborne platforms such as satellites, geostationary satellites, space shuttles, and so on.

I want to give a cook's tour of the type of evidence that we deal with regularly in my court. Overwhelmingly, we deal with aerial photography, which is one of the oldest forms of remote sensing. It can produce black and white, color, and infrared data in either film or digital form. It is usually found by manned or unmanned airborne platforms, such as fixed-wing aircraft, but increasingly from drones. As we are beginning to see the price of drones lowering and technology becoming more readily available, particularly to cash-strapped government departments, we are seeing the increasing use of drone technology and drone aerial photography. Of course, the advantage of aerial photography is being flown at lower altitudes, capturing a lot more detail.

It is not impeded by things such as cloud cover. You get good resolution of buildings, trees, and bodies of water. The more detail you have, the better your visual interpretation will be. It is less amenable to challenges, and I will come to challenges later on.

Science and Innovations in Forest Protection and Management



The presenters on the Science and Innovations in Forest Protection and Management panel. Justice Rachel Pepper, on screen, joined virtually (photo by ADB).

We use aerial photography a lot in our court. For example, the case of *Water NSW v Kiangatha Holdings Pty Limited; Water NSW v Laurence Natale* [2022] NSWLEC 6, which is a 2022 decision by Justice John Ernest Robson. This was not a land clearing case but was about pollution of waters as a result of the construction of a rather large and lengthy dirt road. The Water NSW had basically sought to rely upon aerial maps that identify approximate locations of where this pollution, which was runoff and sedimentation from the road, had entered the water. There was an issue as to whether these maps could be fused in that way. The court found that they could, and that legislation in particular had empowered the investigation officers to obtain the aerial map material. They could then use it quite successfully for prosecution.

Now, you all know about satellite imagery. It uses optical remote sensing, and you get visible near-infrared and short-wave infrared sensors. This basically forms images by deflecting solar radiation from targets on the ground back up. Different materials reflect and absorb this solar radiation differently. Thus, you are able to tell from satellite imagery things like where there was vegetation versus now where there is no vegetation, for clearing cases for example.

The Department of Environment in New South Wales uses Satellite Pour l'Observation de la Terre (SPOT) imaging system to investigate and prosecute criminal offences relating to clearing of native vegetation. Native vegetation, in particular, because of its unique characteristics in New South Wales, is protected by legislation. The Department uses the

Science and Innovations in Forest Protection and Management

SPOT imaging system which is basically a single channel detector sensitive to radiation within a broad wavelength range. When that wavelength range coincides with a visible range, then you get a black and white image taken from space with reasonably good detail, which is what makes it so attractive. You can use the SPOT imaging system to compare current aerial and other satellite images to get either a composite image or, alternatively, to be able to compare over time what is happening on the land. Hence, it is very useful for land clearing cases.

You can see there are a range of cases where SPOT imaging has been used. Interestingly, they are all earlier cases from the court. We have since moved on, I think because better technology has come around. For a long time, that was the imaging of choice and the imaging that was presented to court. To give you a 2014 example, in the case of *Rummery v Chief Executive, Office of Environment and Heritage* [2014] NSWCCA 106, the defendant ultimately pleaded guilty to an offense against the Native Vegetation Act for clearing native vegetation without consent. There was a dispute about the area of illegal clearing. It was not so much a dispute about whether clearing had or hadn't occurred, but about the size of the clearing because that was going to be relevant to penalty. Imagery was used to be able to establish the size of the clearing, which was quite extensive, and the defendant was convicted and fined \$80,000. This probably does not seem like a lot today, but back then was pretty significant. That decision was upheld in the Court of Appeal.

We are increasingly now using Landsat which is a multispectral imaging system.¹ Most of the later cases tend to use the Landsat platform because the sensor is a multi-channel detector sensitive to radiation. Hence, you get a much better multi-layered image, which contains detail, ripeness, color, information on the targets being observed. It is a much more sophisticated type of imagery, and that is why it is being used more regularly in the court today. It is collected using instruments mounted on a satellite which simply orbits the globe. Landsat has nine satellites and operations, and they are able to marry up the images quite well. You get a good range of detail and they have very good ground resolution. They are able to track land use and document land changes that might be due to deforestation, climate change, urbanization, drought, wildfires, and so on.

Landsat is now the New South Wales Department of Environment's platform of choice. They have a 30-year archive of Landsat satellite imagery, which means that we can get a snapshot of what's happening in New South Wales over thirty years. This makes it a pretty powerful tool to be able to detect when there has been illegal clearing on a particular property. To give you a good example, you will see throughout this presentation a number of references to the Turnbells. They are a family up near Moree who are generationally unlawful land clearers, regrettably. In *Chief Executive, Office of Environment and Heritage v Grant Wesley Turnbull (No 3)* [2019] NSWLEC 165, the defendant therein pleaded not guilty to a charge of unlawful clearing of native vegetation. Expert evidence was called using Landsat images of the land, trees and ground cover, to show where there was no vegetation anymore, and the defendant was successfully prosecuted.

¹ The National Aeronautics and Space Administration (NASA) and United States Geological Survey (USGS) Landsat Program.

Science and Innovations in Forest Protection and Management

Other remote sensing technologies that are deployed in the court include radar, Light Detection and Ranging (LiDAR), multibeam echosounders, ground penetrating radar, and remote sensing conservation. I want to touch on a couple of platforms or technologies that come up more regularly in the court, which are LiDAR and ground penetrating radar.

LiDAR is a remote sensing method that uses light in the form of pulsed laser to measure ranges or distances from the earth. These light pulses generate precise three-dimensional information about the shape of the earth, and its surface characteristics. It is very useful in detecting illegal logging, unlawful construction of roads, development—whether it just simply should not be development or even to be able to ascertain overdevelopment in some areas—and the consequences on the geological form of the earth. Usually, this type of technology is affixed to airplanes and helicopters to acquire data over broad areas, but it is increasingly attached to drones.

In our court, it tends to be used mainly in construction cases. For example, in *Planners North v Ballina Shire Council* [2021] NSWLEC 120, the applicant had appealed the refusal of a development application for a manufactured home estate, which is partly located on the coastal wetlands and littoral rainforest areas. LiDAR imagery was used, and survey information was overlaid on top of that, to establish exactly what the tidal and flood zones were across the site, and the adjacent biodiversity banking area. The development application was ultimately granted consent by the court. Nevertheless, it was in a very modified form as a result of this information.



The participants listen to the Science and Innovations in Forest Protection and Management panel. Panelists Justice Rachel Pepper and Darren Thomas are on the screen (photo by ADB).

Science and Innovations in Forest Protection and Management

Ground penetrating radar works by emitting a pulse into the ground and accordingly echoes come from subsurface objects. You can see some ground penetrating radar that has been used in relation to Stonehenge. Use tends to be in tree cases, to map the site of tree roots that may be associated with the tree protection zone and to make sure that those tree protection zones are preserved and not damaged in any way, as in *Sutherland No. 7 Pty Limited v Kuring-gai Council* [2021] NSWLEC 1209. It is also used in assessing the merit of development proposals in areas that might be geologically uncertain, which was the case in *Boomerang & Blueys Residents Group Inc v New South Wales Minister for the Environment, Heritage and Local Government and MidCoast Council (No 2)* [2019] NSWLEC 202.

I now want to talk about the interpretation and analysis of remote sensing imagery and data. They are useful tools for assessment and decision-making tasks. They can be used, for example, to describe and map the distribution and abundance of species, populations of species, ecological communities, and the impact on the environment from activities such as deforestation, desertification, degradation, loss of habitat, invasive species (such as weeds), and resource exploitation (such as illegal mining and logging). So, this technology can be used for a different array of tasks, and in different circumstances.

In New South Wales, we went from seeing these types of technologies occasionally in illegal clearing cases, now to all the time. In fact, I cannot think of a case where this has not been used in my time, which is coming up to 14 years. Prosecutors are given specific powers to access this type of imagery and technology under the Biodiversity Conservation Act and the Native Vegetation Act in New South Wales. As an example, in the case of *Secretary, Department of Planning, Industry and Environment v Auen Grain Pty Ltd; Merrywinebone Pty Ltd; Greentree; Harris (No 2)* [2020] NSWLEC 126, the court held that the expert evidence of two witnesses, which included aerial photographs of vegetation changes, were admissible in a criminal proceeding involving 32 charges of alleged land clearing.

Very quickly, here you can see a good example where remote sensing satellite technology was used to monitor illegal logging in the Peruvian Amazon. You can see the difference between 2013 and 2015, where bare patches are evident from the imagery. I do think a very good example of that was the Global Forest Watch video that we just saw.

The issues that arise with remote sensing evidence can be categorized into four primary areas:

- the authenticity of evidence,
- the quality of the evidence,
- the validity of pre- and post-processing correction—what you do with the image, and
- the validity of interpretation and analysis—what the expert presenting to the court doing with this evidence.

Turning to the authenticity of evidence, you can challenge in court the authenticity and identity of the aerial photographic or satellite imagery. Obviously, a party can adduce evidence of the contents of images by tendering an image. Tendering a document that was, or at least purports to have been, produced by a particular technology is permitted under our Evidence Act.

Science and Innovations in Forest Protection and Management

The court can look at that image and draw inferences from it, including any inferences to its authenticity or identity. So, if you come to court with an image, and it is clearly identified where the image came from and when it was accessed, then that is more likely than not that the court is going to allow that into evidence. But if it is just a photograph that does not indicate in any way what platform it is from or when it was taken, then the court is more likely to say, “Well, I just don’t know the provenance of this particular image. I cannot be certain of its authenticity.” Therefore, it will be inadmissible.

If the court is not able to establish, or if there is a question as to, the authenticity of the imagery just by tendering the document before the court, then it may have to be established by drawing other types of inferences. You may have to prove the remote sensing platform or the technology that was used to regenerate the imagery. Typically, in court, that will involve an expert explaining, “Well, this is the image generated using this technology. I accessed it on this day. This is what it shows.” That is usually in written form, and then cross examination may be allowed in relation to the content of that expert report.

Courts check to make sure that we have properly accessed, authentic material before us, and that we are not relying on some junk science or junk imagery. It has to be proven technology, but that does not mean that it cannot be new technology. I think the previous presentations have shown that there is a lot of new technology and a lot of new platforms, and that will increase with the use of AI applications. It is fine to come to the court with new technology, but it must be proven. There must still be a scientific body of evidence, attesting to its accuracy and its authenticity.

You can also make a challenge to the quality of the evidence, the quality of the imagery, and therefore the findings and inferences of facts that can be drawn from that image. Now, it may well be that there’s an issue about timing of the acquisition of the image. Is this an old image or current image? What is the timeframe of the image? There may be an issue as to the spatial and spectral resolutions of the image, which is basically a fancy way of saying that it is blurry. For example, if there was an issue about the precise location of the clearing, does the image show the precise location of the clearing or is it distorted in some way? There also may be issues in relation to interference with the image and to what extent they have been accommodated by clouds, sun, glint, solar angles, illumination and atmospheric effects.

Challenges may also be made to pre- and post-processing of images. It is rare that you just get a raw image before the court; it is usually altered in some way. Editing the images—or other corrections to deal with masking of particular geographic areas, sunlight, clouds and so on—presents challenges.

A good example of this occurred in *Water NSW v Kiangatha Holdings Pty Limited; Water NSW v Laurence Natale* [2022] NSWLEC 6. This was a water pollution case, from construction of a dirt road. Interestingly, in this case, there was an issue as to the admissibility of the evidence. The investigating officer used drones to go above the defendant’s property to collect various aerial images to try to show how the road had been built, what had been cleared to build the road, and the pollution of waterways. There was a challenge to that evidence, including challenges to the way in which the images had been corrected. Those challenges ultimately were unsuccessful, and the images were used successfully to prosecute the defendant.

Science and Innovations in Forest Protection and Management

Finally, there can be an issue about the validity of the interpretation and the analysis by the expert. Obviously, an image is only going to be as good as the expert who is interpreting it and presenting that evidence to the court. You can challenge the opinions that an expert may draw from the image. There can be a challenge made to the expert's methodology and reasoning, and this has happened in every case that I have heard. A good example of that is the case of *Secretary, Department of Planning, Industry and Environment v Auen Grain Pty Ltd; Merrywinebone Pty Ltd; Greentree; Harris (No 2)* [2020] NSWLEC 126. In that case, there was a challenge to the admissibility of the expert evidence of two witnesses. One was a remote sensing scientist, and the other was an ecologist and zoologist who had relied on the evidence given by the remote sensing scientists. The court held in both cases that there was an admissible opinion that had related to changes in vegetation. In relation to the remote sensing scientist, the analysis of the imagery was held to be admissible because it was based on a vast experience in training and study. In relation to the ecologist and zoologist, notwithstanding that he relied on the aerial photography for the court by the remote sensing scientists, it was held that that particular individual had the requisite expertise to interpret that image and proffer an opinion.

So remote sensing, I can say, is not *increasingly* being used. It is being used to identify and measure and analyze objects and areas and phenomenon in the environment. It is also increasingly being used as evidence in court. That is why I think it is important to understand the nature, the purpose, the type of remote sensing systems, and the imagery and data they are producing, as well as their strengths and limitations, in order to improve utility and effectiveness of this evidence, and in order to actually and genuinely assist the court.

Thank you very much.

Highlights of Group Discussion: Reflections for Judicial Consideration of Forest Matters

Facilitators:

JUSTICE ANTONIO HERMAN BENJAMIN

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

BRIONY EALES

Judicial Capacity Team Leader
for Environmental and Climate Change Law (Consultant), ADB

A brief facilitated discussion followed, with questions from the facilitators and audience on challenges associated with the use of science and technology in forest-related cases.



Justice Benjamin facilitated the group discussion on judicial consideration of forest matters (photo by ADB).

Science and Innovations in Forest Protection and Management



The symposium participants listen intently as Justice Singh responds to a question (photo by ADB).

The discussion involved the following key points:¹

- The New South Wales Land and Environmental Court was established in 1980, making it the first specialized environmental court of superior record in the world. Its website has useful materials on practice and procedure, evidence, and sample directions: <https://www.lec.nsw.gov.au/>.
- New South Wales does not have a specific statute regulating the relevance and admissibility of remote sensing imagery. All evidence is managed pursuant to either the common law or the Evidence Act, under which challenges can be made about the use of images.
- It is important that rules of practice and procedure, and evidence laws, outline the requirements for expert reports, including disclosure of materials, methodology, and clear articulation of findings. Experts must provide detailed explanations, otherwise courts are likely to reject the expert reports.
- The quality of evidence presented before the court is crucial, as judges cannot invent or substitute missing evidence.

¹ The session was conducted under the Chatham House Rule, so the feedback listed is not attributed to any person or court.

Science and Innovations in Forest Protection and Management

- It is important to ensure that experts and scientists are well-informed about the court's specific requirements, which can vary across different jurisdictions, given the complexity that can be involved in gathering scientific evidence (including developing reference data).
- It is important to make judgments accessible to the public, including by publishing them online.
- Not all courts have rules or evidence acts that accommodate technological evidence. However, courts can hold prehearing conferences to discuss evidence expectations, and help refine what evidence the court requires to establish a case.
- New technology should not be feared, even though they will always be subject to scrutiny. For example, when typewriters were invented, typewritten decisions were questioned due to the alleged difficulty in proving that the judge wrote the decision. Similar objections were made against DNA testing in family law when it was first used.
- Access to, and the costs associated with, science and technology-based evidence for parties and courts need to be borne in mind.
- Regarding DNA mapping, the key investment is in generating reference data, which is now being funded by various public and private organizations and made available to laboratories worldwide. Once reference data is established, the cost per test is generally affordable and can be funded by government and public organizations.
- Courts can also consider accepting low-cost evidence brought by citizens and environmental defenders, such as photos taken on phones, where factors including the identity of the photographer, date, and location are established. This may be done orally or through an affidavit or deposition.
- Free platforms, such as Google Earth, may also be relied upon in court to provide evidence in land clearing cases.

Judicial Remedies and Implementation—Facilitated Panel Discussion

Facilitators:

JUSTICE ANTONIO HERMAN BENJAMIN

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

BRIONY EALES

Judicial Capacity Team Leader
for Environmental and Climate Change Law (Consultant), ADB

Panelists:

JUSTICE DR. ANANDA MOHAN BHATTARAI

Supreme Court of Nepal

JUSTICE MANSOOR ALI SHAH

Supreme Court of Pakistan

JUSTICE MARIA FILOMENA D. SINGH

Supreme Court of the Philippines

ALEXANDER HINRICHS

Head of Asia Regional Office, European Forest Institute

BILL MAYNARD

Forestry Practitioner

The session involved a facilitated panel discussion, with questions and comments invited from the audience, on some of the challenges and innovations in identifying, defining and implementing appropriate judicial remedies in forest-related cases. The discussion involved the following key points:¹

- The foremost objective should be to prevent deforestation and ecological damage, emphasizing the value of temporary protection orders or injunctive remedies.
- Where damage occurs, environmental restoration should be prioritized over monetary penalties.
- Monetary penalties often get absorbed into the cost of doing business and do not act as a deterrent or lead to positive ecological outcomes.

¹ The session was conducted under the Chatham House Rule, so the feedback listed is not attributed to any person or court.



The panelists speak on judicial remedies and implementation (photo by ADB).

“Monetary compensation cannot be the first remedy. After all, nature does not have a bank account.”

- Restoration as means of compensation must be ecologically sound:
 - Restoration is not merely planting trees, but about restoring ecosystems as a whole.
 - This process can be challenging, especially in cases where the original forest cannot be fully recreated.
 - If tree planting is the solution, it should be done carefully, with monitoring of its impact on the ecosystem, water management, environment, and social values.
 - Restoration should not be treated as a quick fix but as a long-term process, and effectiveness must be continuously assessed over time to ensure successful restoration.
 - Persistence and cooperation are critical to achieving long-term restoration objectives, which should not be pursued through an adversarial process but a collaborative effort with resource managers.

“There is a saying that the best time to plant a tree was 20 years ago. The second-best time is now.”

- Judges need to reinforce the interconnection between forest land resources and water resources because a forest is more than just a collection of trees.
- Forest laws often do not require restoration as part of a penalty to be imposed on the offender. Rather, a judgment in a criminal case may involve a fine and imprisonment, but restoration of ecological damage remains the responsibility of the State.
- The Philippines Rules of Procedure on Environmental Cases, developed in 2010 following a Supreme Court decision to issue the writ of mandamus that was inspired by a similar concept from India, detail remedies available, including the following:
 - The writ of continuing mandamus, which applies until the judgment is complied with.
 - The writ of *kalikasan* or writ of nature, which is available when environmental damage affects two or more cities or provinces. However, this requirement has proven to be restrictive because ideally the intervention should occur when potentially significant environmental damage is at an early stage (i.e., before reaching the threshold of affecting two cities or provinces). The Supreme Court is reviewing this limitation, as this is within the court’s constitutional rulemaking authority.




Justice Bhattarai responds to a question from the participants (photo by ADB).

Science and Innovations in Forest Protection and Management

- Cease and desist orders can be issued immediately to halt ongoing environmental damage. These may be issued as temporary environmental protection orders that may subsequently become a permanent environmental protection order, allowing for rapid response to environmental concerns.
- Inspection orders allow authorities to inspect premises, even private or industrial properties, to gather evidence of alleged environmental degradation.
- Consent decrees are court approved compromise agreements between parties in environmental damage suits regarding how to restore or protect affected areas.
- Fines and restoration costs may be awarded as damages in environmental cases. For example, a corporation responsible for a gas leak had to restore the affected area to its previous condition.
- Penalties for non-compliance, in some cases computed on a daily basis, may also be imposed.
- Ensuring that remedies are appropriate requires building the capacity of judges. Judges need to understand the ecosystem services provided by forests, such as carbon sequestration and biodiversity conservation, water quality, flood control, and prevention of soil erosion. They also need an understanding of the global forest conservation context and international environmental principles.
- Capacity building also needs to target a large number of judges, rather than a few development champions.
- It is important that we recognize the rights of nature. Ecosystems and natural entities, such as rivers, forests, and species, have their own inherent rights that should be able to be represented in court. Some jurisdictions already acknowledge these rights, ensuring holistic environmental protection, not just addressing human rights violations. Giving legal rights to nature helps us realize the interconnectedness of all life and promotes a balanced relationship between humans and the environment.
- Jurisdiction for forest-related cases is sometimes unclear establishing a direct link between the accused and the crime in poaching, timber trading, and wildlife trafficking cases can be difficult. To address these issues, it is essential to strengthen capacity of investigating agencies and clarify jurisdiction.
- Prosecution lawyers' capacity also needs to be strengthened, given that a robust prosecution is critical for upholding environmental interests in court.
- Prosecutors often struggle to provide evidence, leaving judges with limited options. The executive and prosecutors should be encouraged to adopt new evidence standards and technologies, such as DNA testing, to enhance the quality of evidence presented in court.
- There should be a specialized case management system for effective handling of cases related to environmental or planetary justice, distinct from routine cases.
- A good judgment requires good execution. The judge's duty is not finished when the judgement is rendered. It is just the beginning and there must be subsequent action.
- Cooperation between the judiciary and executive agencies is important for effective implementation of orders.
- Empowering local communities to conserve their forests may help make restoration orders more acceptable.

Science and Innovations in Forest Protection and Management

- Courts need to consider potential conflicts between conservation laws and the customary values and practices of local communities.
- Judges need to support each other to creatively find solutions that promote environmentally sustainable development in projects involving natural resources, water resources, and land resources.
- It can be difficult and daunting for judges to make innovative orders and judgments to deliver environmental outcomes, which shows the value of sharing ideas and cases amongst this community of practice.



Inside the Chitwan National Park. The Chitwan National Park was at the center of a significant environmental lawsuit in the Supreme Court of Nepal. In 2019, the court overturned a government decision to build a road through the park. The court ruled that the government could not avoid its treaty obligations under the World Heritage Convention and Paris Agreement, thereby obligating the government to cause no harm and pursue low-carbon economic growth. Additionally, considering the park's abundant biodiversity, its significance to Nepal's ecotourism industry, and its status as a World Heritage Site, the court determined that preserving the park for the benefit of current and future generations was crucial (photo by Jeevan Kattel/Unsplash).



10

DAY 3
**VISIT TO
SHIVAPURI
NAGARJUN
NATIONAL
PARK**

Day 3 Visit to Shivapuri Nagarjun National Park

Welcome Remarks



LT. COL. RABI K.C.
Commanding Officer
Shree Bhawanidal Battalion
Nepali Army

Lt. Col. Rabi KC warmly welcomed Symposium participants to the park. Shivapuri Nagarjun National Park (159 sq km) is situated on the northern fringe of Kathmandu valley and lies about 12 kilometers away from the center of capital city. The park is also the home to Hindu and Buddhist religious sites, including Baghdwar and Budhanilkantha. Trekking routes connect the park with the Nagarjun, Gosaikunda, Helambu, and Langtang National Parks, enabling recreational hiking and running for local and international visitors. The park also has panoramic views of the Himalayas and the Kathmandu Valley.

He discussed the history of national parks in Nepal, starting with the establishment of the Chitwan National Park in 1975 to protect rhinoceroses and tigers. Conservation work in Nepal has helped communities protect their local jungles and species. The vegetation in the park consists of a variety of natural forest types including pine, oak, and rhododendron, among others. Recorded wildlife in the park includes mammalian species such as Himalayan black bear, leopard, jungle cat, and rhesus monkey. The park is also home to 177 species of birds, including at least 9 threatened species, 102 species of butterflies with a number of rare and endangered species, and 129 species of mushroom.

The Nepali Army has managed and protected the Shivapuri Nagarjun National Park since 2015, with the introduction of a new constitution, and considers the work complex but indispensable. He highlighted the importance of creating opportunities for multiple park uses, including sports and research. He thanked Symposium participants for visiting the Shivapuri Nagarjun National Park and wished them every success with the Symposium.



Lt. Col. Rabi K.C. gives his welcome remarks during the visit to the Shivapuri National Park (photo by ADB).

Welcome Remarks



JUSTICE ANANDA MOHAN BHATTARAI
Supreme Court of Nepal

Justice Bhattarai welcomed judges and delegates to the Shivapuri Nagarjun National Park and thanked them for their attendance. He thanked the Asian Development Bank (ADB) and the Global Judicial Institute on the Environment for supporting the Symposium and welcomed Justice Benjamin to provide additional remarks.



The symposium participants take a hike at the Shivapuri Nagarjun National Park (photo by ADB).

Day 3 Visit to Shivapuri Nagarjun National Park

Welcome Remarks



JUSTICE ANTONIO HERMAN BENJAMIN

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

Justice Benjamin thanked the Nepali Army for hosting Symposium participants at the Shivapuri Nagarjun National Park. He observed that Nepal is unique for having one of the world's only armies with a green function—national park protection. He imagined the potential to protect remote forests around the world if armed forces could lend their resources to environmental policing.

Justice Benjamin congratulated the Nepali Army on its dedication and conviction to its indispensable work. He expressed gratitude that the Nepali Army was engaged in forest protection for the benefit of future generations, making them the true guardians of nature. With that, he thanked all participants for participating in the excursion and wished the Nepali Army the best.



The participants pose for posterity during their visit to the Shivapuri National Park (photo by ADB).

Flowers blooming at a wetland. Wetlands are valuable for flood protection, water quality improvement, and shoreline erosion control (photo by Sabin Khanal/Unsplash).





A forest trail in the Shivapuri Nagarjun National Park. Aside from its rich vegetation and wildlife, the Shivapuri Nagarjun National Park is a vital water catchment area that supplies water to the Kathmandu Valley (photo by Sujitabh Chaudhary/Unsplash).



11

CLOSING CEREMONY

Comments on the Shivapuri Nagarjun National Park



BILL MAYNARD
Forestry Practitioner

Bill Maynard reflected that Shivapuri Nagarjun National Park proximity to 3 million people living in the capital city is extraordinary and similar to parks in Kuala Lumpur and Vientiane. He explained that parks close to cities create opportunities for people to understand, appreciate, and accept the value of nature by interacting with it. Mr. Maynard expressed gratitude for the judicial role and judges' evident dedication to environmental protection. He reiterated the importance of maintaining relationships between courts and scientists and invited participants to engage in the dialogue.



Bill Maynard reflects on the experience of visiting Shivapuri Nagarjun National Park with the symposium participants (photo by ADB).

Closing Ceremony



JUSTICE ANTONIO HERMAN BENJAMIN

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

Justice Antonio Herman Benjamin explained the revised structure for the Symposium closing session, which would now see judges providing their Symposium takeaways. Justice Benjamin commenced his closing remarks by thanking the partners, specifically ADB, the National Judicial Academy of Nepal, and the Supreme Court of Nepal, for their work. He thanked the hosts for their extraordinary hospitality.

Justice Benjamin highlighted the role of the resilience principle in environmental law. While nature is resilient, she sometimes needs support, which the law can offer. Legal frameworks give shape to conservation efforts and support nature's resilience. Justice Benjamin also stressed the need for optimism in environmental law adjudication. Too often, we hear that justice is delayed or that courts cannot address environmental damage, drowning hope. But Justice Benjamin invited attendees to ponder the environmental law achievements won since the 1972 Stockholm Declaration. Would Shivapuri Park exist without a legal framework to protect it? Legal frameworks, therefore, can be a cause for optimism.

This Symposium is the culmination of many years of work, which started as a discussion during the COVID-19 pandemic. The emphasis has been on a regional Symposium to allow South Asian judges to come together. Fortunately, ADB agreed to support the Symposium because it aligns with several of ADB's programs, including its new model forestry law initiative. This Symposium presented an exciting opportunity to integrate feedback into the model law initiative.

The first panel of the Symposium was on legislation. Justice Benjamin described how judges depend on legislation but that environmental law frameworks often lack good quality legislation. Hence, there is a need to improve the quality of legislation globally. So, having a baseline summary of national legislative frameworks is critical. It was also essential to hear how legislation is helping or hindering forest protection. The second panel covered the critical role of forest law jurisprudence. The diversity and the richness of South Asian case law is illuminating. Justice Benjamin noted the democratic



Justice Antonio Benjamin signals the start of the Closing Ceremony (photo by ADB).

Closing Ceremony



Justice Bhattarai, Justice Benjamin, and Justice Malla listen to a speech during the third day of the symposium (photo by ADB).

role of judges in writing case law. However, the law-making function of judges—the judicial function—must be exercised prudently by independent judges acting with integrity. This power should also safeguard future generations and nature.

The role of science was at the heart of the Symposium. Various videos demonstrated the power of technology and science to assist courts in resolving forestry cases and preventing deforestation, and these were merely the tip of the iceberg. Courts globally have developed rules and procedures allowing judges to harness this technology, as shown by our speakers.

Justice Benjamin talked of the vital role of NGOs and public interest lawyers in pursuing environmental litigation. Without them, courts will not see environmental litigation. Courts can relax rules of standing and transform the rules of evidence and court procedure to ensure that meritorious litigation can be tried. Where cases succeed, courts can innovate efficient remedies to ensure better protection of forests.

Courts should also continue to work with new and emerging principles of law, including those unique to domestic jurisprudence. Justice Benjamin explained that emerging principles often materialize, not as a global principle, but in a particular country through one decision. It is only later they are incorporated in international law or domestic legislation. The principle in *dubio pro natura* (in doubt, favor nature) is an example of this point. Courts have espoused this principle, and it has now been adopted.¹

¹ Judge Herczegh referenced *in dubio pro natura* in his [dissenting opinion](#) in *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, ICJ Reports 1997, p. 7 at p. 184. In *TN Godavarman Thirumulpad v. Union of India* 2012 (3) SCC 277, para. 14, the Supreme Court of India observed that environmental justice required a shift to ecocentric approaches because the principle requires that nature has fundamental rights. See S. Baldin & S de Vido. 2022. The In Dubio Pro Natura Principle: An Attempt of a Comprehensive Legal Reconstruction. *SSRN Electronic Journal*. 10.2139/ssrn.4313438, p. 7.

Closing Remarks



BRIONY EALES

Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant), ADB

Briony Eales expressed her appreciation for the candor and commitment of participants in the field of environmental law and focused her remarks on the following themes.

Innovative Judiciaries in South Asia. Ms. Eales highlighted the groundbreaking contributions of Nepali and South Asian judges to environmental constitutional law. South Asian jurists have innovated by interpreting the right to life to encompass the right to thrive, including in a clean environment—a right that extends not only to humans but also to other species. This progressive stance, which emphasizes ecocentrism, holds immense significance in addressing the complex challenges of the 21st century.

Closing the Gaps in Legal Frameworks. During the Symposium, Professor Christina Voigt underscored the gaps in global legal frameworks concerning climate change and biodiversity, which various conferences of parties (COPs) are striving to close. Ms. Eales stressed the pivotal role of courts in nationalizing international legal principles, making them well-positioned to close gaps in domestic legal frameworks.

Collaboration with Scientists on Environmental and Forest Protection. Judges, she opined, can facilitate better integration of legal frameworks by actively engaging with scientific knowledge. The hypercomplex issues courts face benefit from science's tools in understanding connections between actions and consequences. Scientists, therefore, are not just welcome collaborators; they are essential partners in shaping informed decisions.

Science-Judicial Interlinkages for Forest Protection. The interplay between science and judicial innovation holds immense promise for forest protection. Leveraging scientific insights can accelerate conservation efforts. By understanding ecological interdependencies, judges can make informed decisions that safeguard both the environment and community well-being.

Challenges in Sustainable Development. Courts frequently find themselves at the crossroads of environmental conservation and development. The pressure to support development often clashes with the imperative to safeguard the environment—an age-old sustainable development challenge. In this deliberation, Ms. Eales suggested considering the role of just transition—leaving no one behind on the path to carbon neutrality. What does it mean in the context of environmental law? Courts might wish to adopt more ecocentric approaches that balance human well-being with planetary health.

Closing Ceremony



Briony Eales gives her closing remarks (photo by ADB).

Court Solutions and Education. Beyond legal frameworks, courts can contribute to environmental justice by offering solutions to procedural challenges. Education also emerges as a critical tool that can affect mindset changes and equip judges and society with the knowledge needed to address complex environmental issues. For example, courts in Bangladesh have passed orders requiring different sectors to educate themselves about environmental challenges. Knowledge products on judicial remedies

Community Space and Forest Conservation. Involving communities in forestry conservation emerged as a critical Symposium theme. As governments face mounting pressure to conserve territories from the new 30 x 30 goal, a crucial question arises: how can communities continue to protect, live, and work in forests?² Ms. Eales recognized the need to find space for sustainable coexistence. Balancing conservation imperatives with the livelihoods of local communities remains an age-old challenge—one that courts must grapple with compassionately and pragmatically.

² Conference of the Parties to the Convention on Biological Diversity. 2022. Kunming-Montreal Global Biodiversity Framework. [Decision CBD/COP/DEC/15/4](#). 19 December. Montreal, targets 2 and 3.

Closing Remarks



JUDGE KEDAR PAUDEL

Deputy Executive Director,
National Judicial Academy of Nepal

Deputy Executive Director (DED) Kedar Paudel extended his and the NJA's sincere gratitude to the participating justices and judges from courts in Bangladesh, India, Maldives, Nepal, Pakistan, Philippines, and Sri Lanka. He hoped that the Symposium would strengthen cooperation across South Asian judiciaries and national judicial academies. He thanked Justice Antonio Benjamin, ADB's Country Director for Nepal, and the ADB team, without whom the Symposium could not have happened.

DED Paudel highlighted the valuable presence and guidance of the Supreme Court of Nepal, particularly Right Honorable Chief Justice Hari Krishna Karki, Justice Dr. Ananda Mohan Bhattarai, and Justice Sapana Pradhan Malla. He noted the tremendous support of the Chief Registrar, Registrar, Supreme Court of Nepal officers Shreya and Matina, Durga and his colleagues at the NJA, especially Mr. Rajan Kumar K.C., Kabita, Karuna, Pushpa, and Mr. Paras, who helped make the Symposium successful. He also thanked the Ministry of Forest and Environment for facilitating and coordinating the Symposium visit to the Shivapuri Nagarjun National Park.

National judicial academies bear the crucial responsibility of empowering judges, prosecutors, court officers, defense lawyers, and all those engaged in quasi-judicial bodies. Fora like this Symposium promote a critical exchange of ideas, making them essential for supporting national judicial academies. He thanked the participants for their invaluable cooperation throughout the Symposium and wished for the spirit of collaboration to continue.



Deputy Executive Director Paudel, who spearheaded organizing the symposium on the part of Nepal, gives his closing message (photo by ADB).

Closing Remarks



JUSTICE YAHYA AFRIDI
Supreme Court of Pakistan

Justice Yahya Afridi thanked Symposium organizers for the rare privilege of judicial networking and exchange. His takeaways centered on the need for sensitivity and patience in the face of demanding urgent action and empowering courts and communities with capacity building and knowledge.

Sensitivity Matters. As we navigate conservation and protection efforts, understanding the people we engage with is paramount. Their unique perspectives, cultural norms, and concerns shape the path forward. Justice Afridi cited Justice Bhattarai's profound comment that judges must step out of the courtroom and immerse themselves in the forest when adjudicating forestry matters. Each forest is unique, with its own history and customs. Applying general principles to every forest worldwide is impractical. Instead, we should consider the specific context and customs of each area.

Justice Afridi also cited his experience with trying to address deforestation in Babri Banda, a mountainous village in Pakistan. Village elders believed trees were dangerous because criminals might use them to peer into and infiltrate homes. Villagers uprooted any saplings planted in public areas such as garbage dumps, school surroundings, and along railway tracks. Despite village resistance, women supported him because they saw the value in trees. Similarly, women and youth supported efforts to improve garbage collection in the village.

Empower Women and the Next Generation. Women often play a pivotal role in environmental stewardship. Empowering them amplifies our impact. Our focus should also extend to children and schools. By educating and inspiring young minds, we sow seeds of lasting change.

Empower Justice Through Enhancing Capacity and Knowledge. As a former justice of a state high court, Justice Afridi had struggled with pollution cases. The court lacked scientific evidence to prove factories were emitting pollution. Without such evidence, courts cannot act. Justice Afridi identified two critical groups for capacity building: trial court judges and investigators. Trial courts handle cases and recognize wrongdoing, and the evidence often falls short of the required standard for conviction. Investigative processes must also be meticulous, ensuring that evidence is robust enough to secure justice against specific offenders.



Justice Yahya Afridi shares his takeaways and expressed his appreciation for the symposium (photo by ADB).

Knowledge Sharing. A second imperative is the creation of a readily accessible repository of information on technology and scientific advancements. This resource should be disseminated across all courts associated with our work. Whether it pertains to forests or any other issue, ADB should actively share developments. Awareness empowers us all.

Closing Remarks



JUSTICE YASANTHA D. KODAGODA, P.C.
Supreme Court of Sri Lanka

On behalf of the Sri Lankan judges, Justice Yasantha D. Kodagoda, P.C. expressed gratitude to the National Judicial Academy of Nepal, the Global Judicial Institute on the Environment (GJIE), and ADB for inviting the justices to participate in the Symposium. His reflections and takeaways centered on the concepts and processes that he and his fellow judges would take back to Sri Lanka.

Community Management and Forest Protection. The tradition of community management in forest protection—a paralegal activity—attracted Justice Kodagoda’s attention the most during the conference. He expressed hope that Sri Lanka might develop a legislative framework that would provide for community participation in conservation of forestry through civil society organizations through individual participation. Such a new and novel law and its effective enforcement would aim towards creating a synergy between conventional law enforcement and community participation in forest management and protection.

Forensic Science to Support Justice. The Symposium presented scientific methods and forensic tools that can be used to support law enforcement and the administration of justice. Tools like satellite imagery, global positioning systems (GPS), and botanical DNA analysis are crucial for the effective administration of forestry justice.³

Enhancing Judicial Remedies with Independence, Impartiality, and Neutrality. The morning’s visit to Shivapuri Nagarjun National Park inspired reflection on the power of forestry regeneration and crafting suitable innovative judicial remedies in forestry matters. An excellent example from Sri Lanka is when the Court of Appeal recently ordered a former cabinet minister to contribute personal funds to forest regeneration, as he was found responsible for the destruction of a forest. Such orders are very important tools for the protection of the environment, particularly as other judges would also be encouraged to issue such novel judicial orders.

Proactive judicial case management and orders which strictly comply with the rule of law are imperative in environmental and public interest litigation. However, Justice Kodagoda

³ Speakers in the Science and Innovations In Forest Protection and Management Session of Day 2 of the Symposium gave presentations on (i) satellite imagery, which provides high-resolution images of forest cover, deforestation, and land use changes and aids in monitoring and assessing ecological health; (ii) global positioning systems (GPS), which provides precise location data allowing parties to map and track forest boundaries, monitor illegal activities, and plan conservation efforts; and (iii) botanical DNA analysis, which can be used to identify endangered or invasive species, track illegal logging, and enforce regulations.

pointed to the need to avoid judicial activism. The line between making inroads into the rule of law and judicial activism, sometimes called judicial anarchy, is blurred, with activism undermining neutrality, in his opinion. He aspires, therefore, to work as a learned judge administering justice that promotes and protects the environment. He says that a judge should caution himself on the need for judicial independence, impartiality, and neutrality.

Collaborating on Knowledge Resources for Environmental Justice. Justice Kodagoda expressed enthusiasm for reading the national forestry law reports and for future collaboration on judicial training on environmental law. Justice Kodagoda proposed a comprehensive and holistic judicial capacity-building program on the environment to optimize our scarce resources. Such training programmes could seek to empower judges and other justice system stakeholders through targeted training on environmental law that fosters an environmental conservation mindset as a priority. Sri Lanka’s judiciary would be eager to collaborate with the Global Judicial Institute on the Environment and ADB on such a program, especially one that benefits trial judges and judges of superior courts.

Justice Kodagoda also touched on the importance of considering the impact of the growing global population on the environment, particularly given its scarce resources. Finally, Justice Kodagoda highlighted the importance of our shared goal to create model forestry legislation, which the GJIE, ADB, and other partners have graciously undertaken. He eagerly anticipated examining the final product in the hope of identifying suitable provisions and legislative models for Sri Lanka.



Justice Yasantha Kodagoda, P.C., delivers his closing message (photo by ADB).

“I would like to see myself not as a judicial activist in the field of environmental protection, but as the learned judge who will administer justice towards the promotion and the protection of the environment, without fear or favor. And in that regard, I caution myself that I need to be independent, impartial, and neutral. I say this because I know that through judicial activism, you can, even without being conscious of that, move away from being neutral. And I think it is important—like a mantra—to tell yourself daily that you need to be independent, impartial, and neutral, and necessarily respect the rule of law, and decide in a manner that brings about public, national, and international good.”

- Justice Yasantha Kodagoda, P.C.

Closing Remarks



JUSTICE M. M. SUNDRESH
Supreme Court of India

Justice M.M. Sundresh thanked the organizers and participants for 3 days of discussion, debate, and deliberation, and he thanked the Government of India for supporting three judges from India to participate. His comments focused on the following.

Forests are Synonymous with the Environment. The Symposium revealed intriguing insights and crystallized important truths about forests. They are, he said, synonymous with the environment. They conceive, control, and command the elements—air, water, rain, and climate. Forests, therefore, have a distinct role to play in our global environment, and we must change our mindsets in relation to them.

Global Mindsets Must Prioritize Environmental Stewardship. Shifting to ecocentric approaches allows us to view nature from the environment’s perspective. Nature belongs to no one, and it is interconnected. The forests cannot be confined to a particular state, a particular country, or a particular region. A disconnected nature is a misconception we must remove. Forest’s interconnectedness also means that forest issues are no longer local. It concerns all of us, and we must start speaking of the global environment.

Judges Have Tools for Managing Litigation Complexity. Impediments and pathways to environmental justice abound. Some argue that insufficient legislation is a major problem, while others say that public interest litigation is paramount for environmental protection. In Justice Sundresh’s view, constitutions are essential tools for protecting the environment because all courts must respect constitutional mandates, including the courts of first instance. Where there is a constitutional duty to protect the environment, managing the associated litigation challenges becomes possible. Courts can develop procedures to manage public interest litigation, accept expert assistance and amicus briefs, and use science and technology.

Justice Sundresh concluded by thanking the organizers for the opportunity to engage in judicial exchange, making the Symposium a wonderful platform. He also thanked his sister and brother judges from India.



Justice M.M. Sundresh expresses his gratitude for the three days of discussion, debate, and deliberation (photo by ADB).

“Forest is synonymous [with] the environment... The forest conceives, controls, and commands all the elements. This concept is something which we have to remind ourselves [of] all the time. Air, water, rain, climate, and forest [each] has a distinct role to play in this.

[We are] speaking about a change in approach, being ecocentric...The natural beauty of Nepal which we are here witnessing has to be seen from the point of view of environment, and therefore does not belong to anybody... When we talk about environment, when you talk about forests, you cannot confine it to your particular state, particular country, particular region. This is a misconception we have to remove. Forests...[are] a concern of all of us, as is as the environment and forests in Nepal. They are interconnected.

We talk of global economy. [But], we should speak more of global environment. Our mindsets will have to change.”

- Justice M.M. Sundresh

Closing Ceremony

Closing Remarks



JUSTICE MD. NURUZZAMAN
Supreme Court of Bangladesh

Justice Nuruzzaman thanked the Supreme Court of Nepal, ADB, NJA, and GJIE for hosting the Symposium, including judges from Bangladesh. He focused his comments on the following themes.

1. Safeguarding Forest and Protected Areas is Essential for Earth's Survival.
2. Forest Conservation Needs the Implementation and Enforcement of Laws.
3. Embracing Judicial Learning.
4. Sharing Knowledge.



The symposium participants listen to Justice Nuruzzaman's closing remarks (photo by ADB).



Justice Ananda Mohan Bhattarai and Justice Dheebanaz Fahmy listen intently as Justice Nuruzzaman delivers his closing remarks.

Closing Remarks



JUSTICE DHEEBANAZ FAHMY
High Court of the Maldives

Justice Dheebanaz Fahmy, on behalf of the Maldivian delegation, expressed gratitude to the justices of Nepal, judges, friends, and the ADB team. She highlighted five light bulb moments.

Prioritize Effective Implementation of Laws. Justice Fahmy observed that numerous legislation does not necessarily solve environmental problems. Even with remarkable judgments, effective implementation is often lacking. From a Maldivian perspective, the existing legal framework might suffice until a model law is established. The focus might, therefore, be on providing practical remedies, innovatively applying existing systems, and using customary laws.

Judicial Exchanges Build and Transfer Knowledge. The Symposium was a valuable opportunity to learn, build relationships, and establish networks. She hopes for continued engagement with judges across the region and integration of the learned concepts into the Maldivian judicial system, particularly with scientists who can shed light on complex scientific problems. As a key action item, she aims to request the inclusion of environmental justice in the judges' induction program.

Creating Environmental Law Champions. Justice Fahmy gained valuable insights from Justice Singh on Philippine programs for environmental law champions. Through ADB's support, and inspired by Justice Singh, Justice Fahmy hopes that Maldives will be able to create a program of environmental law champions who have a passion for environmental advocacy and protecting our natural resources for future generations, particularly through the creation of innovative remedies.

Empowering Communities to Reach Collective Environmental Goals. Empowering communities to achieve our environmental goals and the potential role of judiciaries in the process was Justice Fahmy's most significant takeaway. The Symposium highlighted that the environment is intrinsically linked to the community. The Nepali experience also demonstrated the value of integrating customary practices and the traditional knowledge of women and girls into forest management. Justice Fahmy hopes to create opportunities for educating and enlightening Maldivian communities on forestry and environmental protection, supported indirectly by judges. The Philippine experience was enlightening. It showed how judges might directly engage with communities on environmental justice.



Justice Fahmy tells the participants of her five light bulb moments during the symposium (photo by ADB).

Forests Regenerate. Finally, Justice Fahmy highlighted the regenerative power of forests. The Shivapuri excursion recharged and energized her, and she will not forget that experience. She concluded by thanking all on behalf of the delegation from Maldives.

Closing Remarks



JUSTICE ANTONIO HERMAN BENJAMIN

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

To usher the end of the Symposium, Justice Antonio Herman Benjamin related that Briony Eales reminded him of a wonderful quote from Henry Van Dyke, “Use what talents you possess. The woods would be very silent if no birds sang there except those that sang best.” In addition, Ms. Eales said, we do not need activism. We just need judges to add their voices to the chorus that demands balance and justice on earth.

Justice Benjamin also recalled Justice Kodagoda’s words, “In environmental law there is no need for judicial activism.” Justice Benjamin added that there is no need for judicial activism because the activism is in the legislation—national legislation, constitutional provisions, and international agreements. There is, rather, in the field of environmental law, judicial activism—by omission. Judges who do not look at those provisions and continue applying legal paradigms that do not exist anymore, this is the real and very dangerous judicial activism.

Moreover, we were reminded by Justice Kodagoda that judges not only have to be independent, impartial, and act with integrity—they must be perceived by society as such. These principles sit at the heart of the Bangalore Principles of Judicial Independence and Integrity.

Finally, Justice Benjamin echoed Justice Fahmy of the Maldives in saying that we have laws, but we need implementation. When judges implement laws—laws that are dormant, forgotten, rejected by misconceptions—those judges are not being activists. They are doing exactly what their responsibilities require and what they are paid to do.



Justice Antonio Benjamin, who first conceived of organizing the symposium, gives his final remarks for the event (photo by ADB).

Closing Keynote



JUSTICE DR. ANANDA MOHAN BHATTARAI
Supreme Court of Nepal

Thank you for that. How generous you are in appreciating my work. Thank you so much.

My colleague, Justice Sapana Malla, justices from the region, with Justice Benjamin at the center, Justice Nuruzzaman from Bangladesh, Justice Sundresh from India, Justice Ali Rasheed Hussain and Justice Dheebanaz Fahmy from Maldives, my friend Justice Yaya Afridi from Pakistan, justices who contributed online, my friends Justice Shah and Justice Singh from the Philippines, and judges from Australia: I stand before you with a great sense of satisfaction. As a researcher, my serious writing has been on forests. When I was doing my master's at the National Law School, Bangalore, Nepal had just initiated the community forestry program. At that time, I was not sure what way this program would take and how successful it would be. But I had hopes.

As someone from a legal background, I believed that the New Forest Act of 1993 had unveiled a bottom-up approach to environmental governance and forest protection. I come from a village; I am not a city dweller. I have seen how villagers were affected by the hostile human-nature relations that bureaucracy created in the 1960s, 1970s, and 1980s. Dr. Yam Malla is not here but was there while we journeyed through the Shivapuri Nagarjun National Park this morning. He was one of the few scholars who wrote that our old approaches were not correct. Dr. Malla, and our friends from Australia and other countries started pilot projects in the Sindhupalchowk, Kavre, and Dolpa districts, where they involved communities and got a different result—massive forest regeneration. They created a platform for the community forest program, which became a part of the law in 1993.

Today, I was so happy. I was thrilled that my friends and justices were kind enough to go to the mountains with us. As I mentioned yesterday, in order to understand the mountains, you have to locate yourself there. Nepali mountains are a microcosm of biodiversity. In a single mountain, you will find tropical, subtropical, and alpine forests. If it is very tall, you will see shrubs, the Himalayas, and the snow. It is unique. And now, you see so much regeneration as well. The other day, I was talking with Justice Benjamin—my mentor—and he was asking me whether Shivapuri was plantation or regeneration. I said it is regeneration. You saw yourself how it is going.

I was also thrilled by the presentations made throughout the Symposium. I have been a judicial educator. I was involved in the founding of the Judicial Academy of Nepal (NJA). My friend Kedar (Deputy Executive Director of the NJA), who worked with me when I was in the high court, is a noble judge and I really appreciate him and congratulate the NJA team.

Closing Ceremony

I am also thankful to ADB. This is the second time that ADB has helped us organize a regional program of this scale. The first was in 2015 when Briony had just joined the team, and now Christina has taken the lead and organized this program. I thank you, Christina, Briony, Martin, and your predecessors, Irum and Grip. ADB has been so kind to organize this kind of program in Nepal. Your affection and love for Nepal cannot be measured in words. Also, Justice Sundresh, kindly convey my regards to Chief Justice Chandrachud. When he was in the Allahabad High Court, Chief Justice Chandrachud joined us in the environmental justice roundtable in Bhutan. It is because of his positive attitude for this conference that the nomination from the Indian judiciary for this Symposium could take place.

Friends, you have been here and seen the forest. I have always been very keen to have an interface between law and science. As judges, we are familiar with our thinking process on the problems that we encounter, but often we listen to science less. Science offers us incredible support for imparting justice.

Here is a story that demonstrates this point. A few years back, in the district of Gorkha, a huge consignment of alleged Tibetan antelope fur was found. The Tibetan antelope is protected under Annex I of CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora), meaning it is listed in Annex I of the National Parks and Wildlife Conservation Act, 2029 (1973). Tibetan antelopes are found in the Himalayas, the southern part of the Himalayas, mostly in Tibet. I was surprised. It was such a huge consignment and people were arrested. But how do you find out if this was Tibetan antelope fur? What if it was the fur of sheep? At the time, I was participating in a CITES conference in Bangkok with the chief of the Central Investigation Bureau. I asked him, "Sir, how do you identify if it is really fur of Tibetan antelope." He said, "Sir it is very easy. Take the fur in the finger and just throw it up. If it goes up, it is Tibetan antelope, and if it falls down it is sheep fur." But how will judges understand this? How do you measure this in a case? How do you use such evidence in a case?

I have consistently emphasized the need for DNA labs in Nepal for this reason, which our friends have highlighted in this Symposium. There are many cases requiring DNA evidence, rhinoceros horn cases are an example. If the rhinoceros' horn is genuine and the rhino is killed, the crime attracts up to 15 years of imprisonment. But, what if the rhinoceros horn is a fake? How do you find out when it looks real? If it is not a genuine rhinoceros horn, is it a case under the National Parks and Wildlife Act? Or is it just fraud and cheating? These questions show why DNA testing is very important. These tests are gradually becoming available in Nepal, and this story illustrates how important science is to law.

Our friends from the field of science also highlighted the importance of satellite imagery, which was crucial in resolving the case of Churia (hill range with abundant biodiversity which extends 800 kms east to west in Nepal and covers 12 percent of Nepal's total land area). Himalayan rivers carry large amounts of sediment, which is deposited on agricultural fields in plain areas, for example, the Koshi River. But how much sediment should we remove to protect agricultural land and from where? There are 164 rivers flowing through the Chure region. Those rivers irrigate the whole Terai region and the Gangetic plain. Satellite imagery, GPS systems, and the scientific community can show where deposits build up and where sediment should be extracted. While sediment extraction is necessary for development, and to prevent its excess buildup, it should not be exported. We cannot permit the plundering of our rivers, destroying

our of resources for revenue generation. The Supreme Court, therefore, banned the export of sand, gravel, and other riverbed materials and directed the government to pass a law to that effect. The issue was crucial for our country and science demonstrated that.

Eeshan Chaturvedi, thank you for your survey of comparative legal approaches. Our countries' legal systems are different, but our ecosystem is similar. Within South Asia, the Himalayas run through Bhutan, India, Nepal, and Pakistan. The vegetation knows no borders and we must protect it together. We must use our bio-resources and their components judiciously to benefit local people. Such practices are how we can link forests and biodiversity, a global issue. Linkages must be established. Looking at comparative perspectives—what we have done in our country—also helps us chart our path further. It can also be useful for other jurisdictions such as in the protection of Chittagong Hills, the outer slip of the Himalaya system.

Dr. Yam Malla's remarks on the changes in mountain dwellers and their dependency on forestry were educational. A recent census in Nepal showed huge migration from mountain areas. 492,000 houses in the mountain region are empty. Just imagine how scary the situation is! Unless people find it possible to have a good life in the mountains, they will not live there. If mountains collapse, people will start flowing outward—just like the rivers. Whose problem is this? This is our common problem. Therefore, I think we need to break the narrow domestic walls. South Asia is a region where, despite all our good wishes, legalism is very fragmented. We do not even have a single convention for the protection of the Himalayas. I know there are limitations on what judges can do for this, but they are great influencers.



Justice Ananda Bhattacharai, believing that intercountry dialogue is crucial, thanks the symposium participants for going to his home country (photo by ADB).

Closing Ceremony

Energy also connects us. Nepal currently has a surplus of electricity. In 5–10 years, Nepal will likely have some 10,000 megawatts of surplus electricity. Where will it go? It will undoubtedly go to India and Bangladesh. Then we will be able to build up synergy. But for this, electricity-generating watershed needs to be protected? Comparative approaches help us think about these factors as well.

There are obstacles to success. Nepal is trying to implement second and third-generation forestry reform. Many people tend to think it is the bureaucracy versus the forest or the community versus the forest. No—the community is with the forest, and the bureaucracy is with the forest. That is how Nepalis have it. Without this system, we will not achieve our goal of 46% forest cover in Nepal.

I therefore appreciate the forest bureaucracy, particularly its enthusiasm and open-mindedness in working with the community to protect forests.

Finally, as a Nepali, I take real pride in the Model Forest Act Initiative starting in Nepal and Nepal presenting a case scenario. There is a long way to go, but we are together in this. We are with the Global Judicial Institute on the Environment, IUCN, and ADB in taking this initiative to its logical conclusion.

Justice Benjamin was right in saying that this Symposium was initially conceived as a capacity-building exercise. I am not saying anything to influence you. I just request you, as judges, to have empathy.

On eco-centric versus anthropocentric approaches, kindly make up your mind. If a case comes before you where there is a victim attacked by wild animals, certainly take an anthropocentric approach. But, if the matter relates to the life of the forest, water, or the land system, look into various aspects concerning ecocentrism. Justice is not a single narrative. You have your own experiences. Navigate the case with your own experience. Use your imagination and bring out the result, and think about the impact.

Yesterday, Bharati Pathak from the Federation of Community User Groups Nepal (FECOFUN) shared with us that villagers find working in the community forest challenging. If a community forestry program member is taken to court and their case is kept pending for long, that is lack of empathy for the local people from your side. Like me, most of you come from a village. Most of you have a rural background. Think about our ancestors and our brothers and sisters in the village when you come to a decision. You will then probably reach a good conclusion.

Use science and give an order to conduct DNA tests. There is a lab in Kathmandu and labs are coming in various regions. So, use of DNA evidence is very much possible in the near future.

We do not have a big deforestation problem in Nepal because the borders of the forest are well-determined, the community forestry program is in full swing, and the protected areas are carefully guarded. As you saw, there is an 8,000-strong contingent of the Nepal Army guarding national parks. It shows the importance attached by the Government of Nepal to safeguarding our protected areas. In the 1980s, international experts predicted there would not be a single tree in the Nepali mountains by 2000, a scary scenario. Researchers then came to Nepal, and

I want to mention Jack D. Ives and Bruno Messerli. They studied the whole Himalayan region, right from the Indian coast to Myanmar, and concluded that the prediction was not valid. In their 1989 book, *The Himalayan Dilemma: Reconciling Development and Conservation*, they distinguished between land slippage and landslides and traced the evolution of the modeling process. Jack Ives wrote another book in 2004, *The Himalayan Perspective*, which influenced my book on the Protection of Himalayan Biodiversity.

We must understand the environmental challenges facing the Himalayas and the need for unified approaches. There are many unresolved issues that Nepal cannot solve alone. We can do nothing about forest fires in the mountains without cooperation. We cannot address invasive alien species such as *Miconesia* and *Parthenium* alone. We need international cooperation, especially pertaining to the access to genetic resources and benefits. We need a legal regime covering the whole Himalayan system that covers biodiversity conservation and access to genetic resources and ensures that people in the region, especially mountain peoples, benefit. Kindly take this to your respective governments.

I thank you all for coming to Nepal. Intercountry dialogues like this are critical. The Supreme Court of India organized an international congress in 2021 with the National Green Tribunal (NGT), spearheaded by Hon. Justice Swatanter Kumar, which was wonderful. He has been a real mentor. Organizing conferences of that magnitude would not be possible every year without Justice Kumar. Sir, from here, I salute you.

Thank you everybody for listening to me while I put forward my case for Nepal and the environment. Thank you so much.

Closing Ceremony

- The delegation from India presents gifts to the presenters and organizers of the symposium (photos by ADB).



Closing Ceremony



Closing Ceremony



Closing Ceremony



Closing Ceremony

- The National Judicial Academy of Nepal presents token of appreciation to the symposium speakers and facilitators (photos by ADB).





Closing Ceremony



Closing Ceremony



Closing Ceremony



Closing Remarks



CHRISTINA PAK

Principal Counsel & Team Leader,
Law and Policy Reform, Asian Development Bank

Christina Pak reflected on the journey leading up to the Symposium, one marked with trepidation and courage because of its unconventional approach. The mission: uniting diverse justice-sector stakeholders and calling on them to work together to create a whole planet approach in this decade of action. With this Symposium, ADB, GJIE, and the NJA challenged judges to engage with scientists, policymakers, and legislators. Scientists stepped into courtrooms, bridging disciplines. And judges dared to venture into the forest. Ms. Pak expressed gratitude to the participants for their willingness to engage and contribute to inspired outcomes.

Ms. Pak was hopeful for the path ahead because we stand supported by all arms of government, communities, and each other. Forests are everything, she said. They are the solution to multiple global crises, and they can solve everything at the same time. She hoped that many trees and forests would grow from this event.




Christina Pak officially closes the symposium with her remarks (photo by ADB).

Closing Ceremony

The Symposium has been instrumental in launching the Model Forest Act Initiative in Asia, a promising new endeavor that will advance forest conservation, and advance the Asia Pacific Women Judges Network. Participants should anticipate the following tangible steps following this Symposium (i) a Symposium booklet with copies of the presentations, findings, and the country reports; (ii) updates and requests for feedback on the Model Forest Act Initiative; and (iii) ADB's continued support. Ms. Pak stressed that ADB is committed to inclusive and sustainable development and has prioritized environmental resilience and climate action. ADB will continue its mission in Asia and the Pacific, which includes creating a platform for collaboration, experimentation, and innovation.

Ms. Pak thanked the NJA and the Supreme Court of Nepal, who made the Symposium possible. She thanked all attending justices, Justice Benjamin, and the GJIE for convening the Symposium and inspiring us, fueling our courage to do more. By connecting us across borders, Justice Benjamin and the GJIE amplify ADB's impact, for which we are grateful. Ms. Pak thanked the ADB team and the contributing experts for ensuring the Symposium's success.

A photograph of a dirt path winding through a dense forest, overlaid with a semi-transparent orange filter. The path is the central focus, leading the eye into the woods. The trees are tall and thin, with some sunlight filtering through the canopy. The overall mood is serene and natural.

Shivapuri Nagarjun National Park in Nepal. The participants were able to experience the benefits and beauty of the park first hand on the third day of the symposium (photo by Abhijet Pokhrel/Unsplash).



Sariska National Park is a national park and wildlife preserve in Rajasthan, India. It was established in 1955 in Sariska Forest as a wildlife sanctuary and was declared a national park in 1979 (photo by Vivek K. Kaushik/Unsplash).



12

OTHER MATERIALS

Policy and Jurisprudence in Brazil on the Use of Satellite Images in the Enforcement of Forest Law¹

In 2017, the Federal Office of the Attorney General in Brazil launched the *Amazônia Protege* (*Amazon Protect*) program,² using satellite images, cross-referenced with public data, to support the enforcement of the Brazilian Forest Code against illegal deforestation in the Amazon biome—an area that encompasses over 4 million km² (1.5 million square miles) in Brazil alone. The Amazônia Protege Program seeks to give real effect to the laws on forest and flora protection, with judicial enforcement before forest degradation and the private appropriation of public goods have been consolidated.

In the first phase of the project, the prosecutors filed enforcement actions against all those responsible for tracts at least 60 hectares in size that had been illegally deforested in 2016. This included 1,088 public civil actions (*ações civis públicas*) against over 1,000 defendants (including persons as well as corporations), seeking ecological restoration and damages of up to R\$2.4 billion (US\$475 million). In the second phase, which has included 1,550 illegally deforested areas, data indicate that 54 were in federal protected areas (national parks) and 18 were in indigenous territories. In addition, 644 tracts were located in federal forests.

Considering the size of the Amazon biome, in many cases it is not possible at the early procedural stages to determine who is responsible for the deforestation identified in satellite imagery. As a result, the federal public prosecutors began filing complaints by “public notice” against unidentified defendants. The pleadings at this stage included the geographic coordinates and satellite images demonstrating the deforestation in the area in question, even though the name of the defendant could not yet be determined.

At the trial court level, federal judges dismissed a large number of these lawsuits (without reviewing the merits) under the rationale that the complaint had not specified the name of the defendant. On appeal, the Regional Federal Court of Appeals (TRF1) upheld the trial courts’ dismissal of these cases.

The National High Court of Brazil (STJ), in a 2020 decision, reversed the TRF1 judgment and allowed the case to proceed. In addition to recognizing the use of “remote technology” for the production of evidence in deforestation cases, the STJ upheld the concept of citation by “public notice” of unidentified defendants in environmental suits. The court held that doing so to prosecute illegal deforestation, when the violator may not readily be identifiable on the ground, is not a violation of due process.

¹ Analysis and translation from Portuguese by Nicholas Bryner.

² Amazônia Protege, *O que é o projeto Amazônia Protege*, <http://amazoniaprotege.mpf.mp.br/o-projeto>.

Below is a summary of the case:

REsp 1.905.367/DF, 2a Turma, DJe 14.12.2020, Rapporteur: Justice Antonio Herman Benjamin

Federal Office of the Attorney General v. Uncertain and Non-Located Person

The Federal Public Prosecutor's office in the state of Rondônia initiated a Public Civil Action against an "uncertain person" as the occupant of 67 hectares of land that had been illegally deforested. The complaint sought restoration of the degraded area as well as the payment of damages for ecological and collective harm.

The complaint was filed in the context of the Amazônia Protege project, an initiative of the Attorney General's Office, IBAMA (Brazil's Environmental Protection Agency), and ICMBio (Brazil's Protected Areas Agency) intended to halt the troubling trend of deforestation in the Amazon Basin.

At the trial court stage, the federal judge dismissed the case (without reviewing the merits) on the grounds that the complaint did not specify the name of the defendant—despite acknowledgment that the initial filing did include the geographic coordinates and satellite images demonstrating the deforestation in the area in question. On appeal, the regional federal court upheld the trial court's dismissal of the case "for failure to meet the essential requirement of naming the defendant liable for the alleged damages and the obligation of environmental restoration."

Based on an innovative interpretation of the Code of Civil Procedure, the **2nd Chamber of the National High Court (STJ) reversed the lower court's judgment, holding that the "public notice" citation of unknown or uncertain defendants was not inconsistent with the principles of due process of law. One important rationale for this decision is the proper nature of environmental obligations under the 2012 Forest Code in Brazil. As the STJ has held in multiple precedents, liability for illegal deforestation is tied to the tract of land; accordingly, the responsibility to restore degraded or deforested land remains tied to the land—not to the person—even if it should change ownership.**

In its judgment, the STJ noted that adaptations in procedural law might not always seem "comfortable" for the judiciary. However, at the early pre-procedural stage in environmental cases, it is not practical to require the plaintiff to identify precisely who committed the offense. Rather, the availability of satellite imagery is sufficient evidence to indicate that an offense has in fact occurred and that judicial intervention is necessary. Therefore, such cases should not be dismissed, and should be allowed to proceed. Continuing with the action, even if the alleged violators have not yet been identified, has the power to prevent undue and un-checked exploitation of ecologically valuable areas in the Amazon.

The STJ observed, in part:

"[T]he aim of the "Amazon Protect Project" is to give real effectiveness to the norms for the protection of flora and associated ecological goods, precisely in response to the Achilles' heel of Brazilian environmental law, which suffers from a notorious

Other Materials

implementation deficit and a lethargic State (including the judiciary) that creates a generalized sense of impunity, contributing to the immense rate of illegal deforestation verified year after year. The initiative is innovative and commendable in every sense—especially in overcoming the model of fragmented, unsystematic and uncoordinated action by public prosecutors and environmental agencies—in making use of new technologies and tools, such as satellite-captured images, that are available today in real time, with a high degree of resolution and reliability, something unthinkable until recently.

Judicial action, then, can occur, as common sense recommends, at a moment before the degradation and appropriation of public patrimony has been consolidated—thus breaking the criminal routine of ecological dilapidation, which works in a chain of successive stages: first, “land grabbing” of public property; second, deforestation; third, episodic and erratic administrative action by the environmental agency, usually against a “front” or decoy person or entity (as the real beneficiary remains camouflaged), which results in fines never charged and, if charged, never paid—“theatrical” environmental implementation; and, finally, in the last phase, land regularization by the authorities and open economic exploitation with livestock and agriculture, all officially sponsored through subsidized agricultural credit and other benefits from the State.

...

Just as in the fight against organized crime, without using bold methods and cutting-edge technologies (satellites and drones, for example), any judicial impact is illusory, due to the impracticability or extreme difficulty of satisfactorily monitoring and inspecting the large and mega-diverse biomes of Brazil. There are millions of square kilometers of dense forest, wetlands, vast spaces either uninhabited or with minimal human occupation and devoid of roads. It is enough to note that the Satellite Monitoring Program for the Brazilian Amazon Forest (PRODES), managed by the National Institute for Space Research (INPE), annually identifies more than 20,000 outbreaks of deforestation in the Amazon region. [F]or the legal system to force—let alone as a condition for filing a public civil action—in loco measures in some of the most remote and inaccessible places on the Planet . . . would be, by historical analogy, to insist on using Stone Age tools while living in the age of steel and titanium. In the present case, satellite images prove beyond any doubt both the materiality and the quantity of degradation in the deforested tract, with geographic precision.

...

Civil procedure rules in collective suits, especially in the environmental area, are one of the most propitious legal fields, conducive to innovations in legal, technological and judicial management methods. The ethical, normative and principle-based scheme for collective actions is distinct from (and often runs contrary to) classic proceduralism, with its individualistic, formalist nature derived from laissez-faire systems. . . .

Without entering into a detailed discussion of the pathology of judicial discomfort in the realm of civil procedure and emerging technologies, it is enough to mention that, due to the temperament of the position and professional training, the suggestion of normative

or organizational changes in judges' day-to-day practices is likely to be met with an immediate and instinctive sense of distrust. For judges, this is an understandable reaction, either because we are concerned (and rightly so) with the guarantee of due legal process for the parties, or because we embody in the popular imagination, whether we like it or not, the role of guardians of the status quo and of jurisprudence. This perspective leads us, unconsciously or not, to an impulse to resist sudden changes in the way we perform our duties—to the judicial comfort zone. As a cautionary note, judges must be able to distinguish between the useful and legitimate traditions in civil procedure and the backward-looking barriers to social change and improvement of the quality of judicial decision-making, especially when, in our day-to-day personal and professional daily lives, we already take advantage of many of the benefits of progress”

Building Bridges in Legal and Policy Frameworks



BRIONY EALES

Judicial Capacity Team Leader
for Environmental and Climate Change Law (Consultant), ADB



Scientific Outcome of
the IPBES-IPCC Co-
Sponsored Workshop
on Biodiversity and
Climate change (2021)

<https://zenodo.org/record/5101125>



“Current policy and legal regimes addressing the climate and biodiversity crises are disconnected at both local and global scales, which has led to missed opportunities to deploy actions that alleviate both these challenges.”

H.O. Pörtner et al. 2021. *Scientific Outcome of the IPBES-IPCC Co-Sponsored Workshop on Biodiversity and Climate Change*. Bonn: IPBES Secretariat. p. 147.



“Both the CBD and UNFCCC tend to lack clear and effective mechanisms to find points of commonality or to explicitly consider the interactions between their domains and objectives.”

H.O. Pörtner et al. 2021. *Scientific Outcome of the IPBES-IPCC Co-Sponsored Workshop on Biodiversity and Climate Change*. Bonn: IPBES Secretariat. p. 149.



Other Materials

“Nationally Determined Contributions (NDCs) submitted are not required to specify if and how climate mitigation actions might have negative effects on biodiversity.”

H.O. Pörtner et al. 2021. *Scientific Outcome of the IPBES-IPCC Co-Sponsored Workshop on Biodiversity and Climate Change*. Bonn: IPBES Secretariat. p. 149.



ADB DMC Climate and Biodiversity Legal Frameworks

- High-Level Survey of 43 DMCs
 - **Approx. 75%** of NDCs mention biodiversity but overwhelmingly in relation to adaptation with nature-based solutions
 - **Approx. 84%** of NBSAPs refer to climate change, but mostly as a driver of biodiversity loss



Kunming-Montreal Global Biodiversity Framework, 2022

- Halve and reverse biodiversity loss by 2050, with 23 targets for 2030, including the 30 x 30 target. 30 x 30 calls on governments to:
 - Protect 30% of their land and oceans by 2030 and
 - Restore 30% of their degraded land and oceans by 2030, to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.



Simkhada and Others v. Office of the Prime Ministers and Others (2018 Nepal SC)

- SC overturned government approval of a road through the Chitwan National Park—a remaining refuge of the single-horned Asiatic rhinoceros and Bengal tiger
- Climate change-induced calamities are complicating Nepal's conservation efforts. Such factors make it necessary to protect the constitutionally guaranteed right to a clean and healthy environment and to realize “environmentally sustainable development” through planned conservation efforts
- Nepal ratified the Paris Agreement, which is dedicated to the health of global ecosystems and Earth's well-being. Thus, Nepal is committed to pursuing low-carbon economic and social development that safeguards natural heritage



*BELA v.
Bangladesh*
(2021
Bangladesh SC)

- Public interest litigation about illegal sand dumping in wetlands
- Human beings are just guests of Earth. Plus, wetland conservation is essential for humankind's survival because wetlands purify water
- National government is encouraged to formulate a Renewable Energy Act and create a responsible ministry
- Bangladesh, as a party to the Ramsar Convention, must classify all wetlands as national property, pass a wetlands protection law, create a responsible ministry, and educate all students about the importance of wetlands
- Government must also send the judgment to Bangladesh's judicial administration training institute



Climate Change,
Coming Soon to a
Court Near You

Mandarin translation forthcoming

<https://www.adb.org/publications/series/climate-change-coming-to-court>





ADB

Takeaways

- Climate change and biodiversity conservation actions are more effective when harmonized and integrated
- Solutions that offer mutually beneficial outcomes for climate change and biodiversity conservation
- Continuing mandamus orders might be part of the judicial toolkit for ensuring integrated solutions

Contact: beales.consultant@adb.org

Image credit: Gayle Certeza, Daniel Desembrana, and John Michael Casipe

Engaging with Court Systems: External Perceptions and Experiences



ALEXANDER HINRICHS

Head of Asia Regional Office, European Forest Institute (EFI)

INTERNATIONAL
PARTNERSHIPS
Facility

Engaging with Court Systems: External Perceptions and Experiences

Dr Alexander Hinrichs - Head of Asia Regional Office

28 April 2023



Law and Forestry

- In most jurisdictions, forestry matters implicate constitutional, administrative, **criminal**, and civil law
- **Framing Question:** Why are there so few successful prosecutions of illegal logging and forestry crime considering the presumed scale of illegal activities and environmental and economic damage caused?

What is a Forestry Crime?

- **Legal basis:** defined in applicable legislation, such as the criminal code or sanctions section of the forest law
 - In reality: significant grey zones -> multi-stakeholder processes to review reg framework
 - Large number of violations - distinction between administrative offences and crimes not always easy
- **Complexity:** illegal logging and other forest crimes often include document fraud, tax evasion, money laundering, corruption -> transnational organized crime feeding national and international markets

Is there a criminal case?

- **How is the crime detected?**
 - Requires information on land, utilization rights and locations
 - Requires specialized forestry knowledge (species, logging rules)
- **Is the complaint submitted to the correct agency?**
 - Often raised with local forestry authority
- **Is there enough evidence to investigate?**
 - Requires timely access to site, products, actors
 - Beneficial are third party information sources
- **Is someone responsible?**
 - Requires knowledge of who can be identified as being responsible (casual chain)

Positive experiences – a personal view

- **General willingness at national level**
 - Investments into forest governance and strong judiciary
 - Willingness to go against larger private actors
- **Appropriate structures**
 - Independent verification agencies, specialized staff
 - Interagency collaboration

Positive experiences – a personal view

- **Active public engagement**
 - Reports of third party investigations (CSOs, forest certification)
 - Non-compliance platforms
 - Measures to protect communities / CSOs / whistleblowers
- **Access to information**
 - Maps, permits, reports
 - Scientific sources and technologies
- **Capacity building**
 - Educate enforcement agencies, prosecutors, communities, CSOs / general public
 - Share lessons learnt (nationally, regionally and globally)

Positive experiences – a personal view

- **Use of broad range of legal options**
 - Preventive actions (before the road is built)
 - Full consideration of environmental damage
 - Broader considerations: money-laundering and corruption
- **Court decisions that can be enforced and applied**
 - Controls that remedies are implemented (retain court oversight of the matter)
 - Science based remedies and smart restrictions (companies can't buy back confiscated timber or machinery)
 - Rules on public reporting on compliance with orders – to maintain public oversight

Thank You!

Supreme Court of the Philippines and Community Law Clinics



JUSTICE MARIA FILOMENA D. SINGH
Supreme Court of the Philippines

Supreme Court of the Philippines and Community Law Clinics

Maria Filomena D. Singh



Overview

I. Revised Rule 138-A
or the Revised Law
Student Practice Rule
(A.M. No. 19-03-24-
SC)

II. Environmental
Information on the
Philippines

III. Law Clinics
Specializing in
Environmental Justice

IV. Conclusion



The Revised Law Student Practice Rule

Revised Rule 138-A (A.M. No. 19-03-24-SC)

The Revised Law Student Practice Rule

(Approved on June 25, 2019)

Mandated all law schools to establish their law clinics under a clinical legal education program (CLEP) and all students taking the bar examinations to complete CLEP and engage in limited practice

Designed to ensure access to justice of the marginalized sectors, to enhance learning opportunities of law students, to instill among them the value of legal professional social responsibility, and to prepare them for the practice of law

Expected to extend the reach of legal aid service to the underserved population

Not limited to traditional legal aid work; also covers policy reform and development and other community-based initiatives and activities

118 law schools have been offering CLEP

Environmental Information on the Philippines

- Protected areas - 5.13 million hectares (out of 30 million hectares total land area)

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines

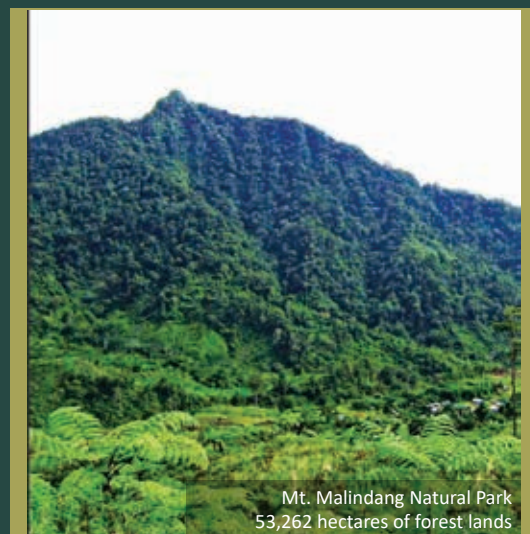


The Northern Sierra Madre Natural Park
Home to 1,079 species of trees

Environmental Information on the Philippines

- Forest cover of 7.01 million hectares

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines

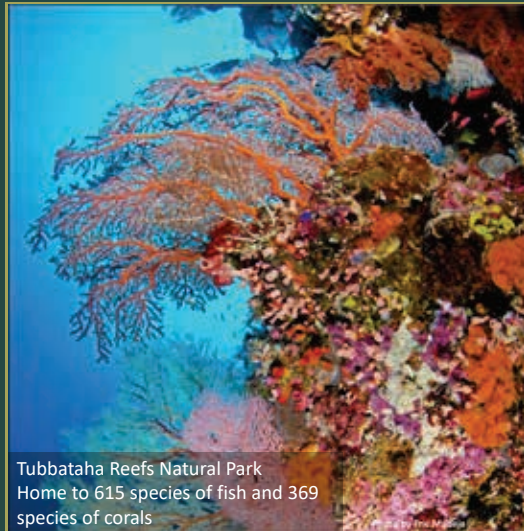


Mt. Malindang Natural Park
53,262 hectares of forest lands

Environmental Information on the Philippines

- 797,814 hectares of corals

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines

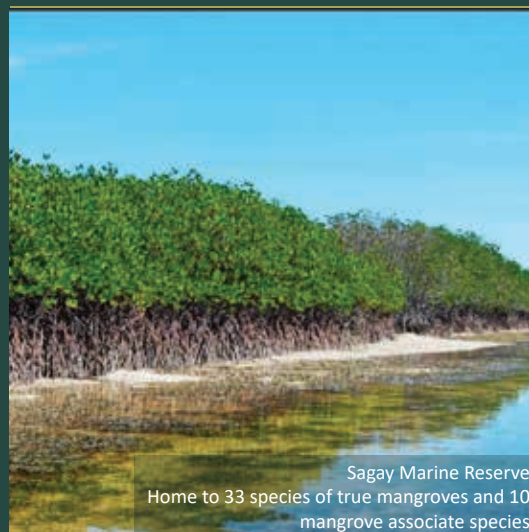


Tubbataha Reefs Natural Park
Home to 615 species of fish and 369 species of corals

Environmental Information on the Philippines

- 303,521 hectares of mangroves

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines



Sagay Marine Reserve
Home to 33 species of true mangroves and 10 mangrove associate species

Other Materials

Environmental Information on the Philippines

- 303,521 hectares of mangroves

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines



Sagay Marine Reserve
Home to 33 species of true mangroves and 10 mangrove associate species

Environmental Information on the Philippines

- Known fauna - 22,377+

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines

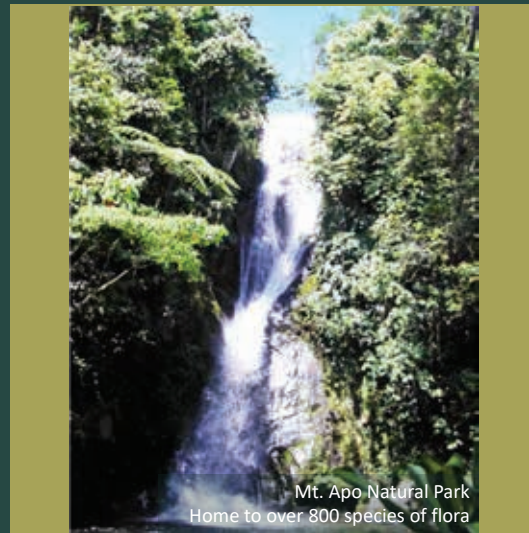


The Philippine Eagle

Environmental Information on the Philippines

- Known flora - 11,138+

Sources: Philippine Statistics Authority's Compendium of Philippine Environment Statistics (2010-2019); Guidebook to Protected Areas of the Philippines



Mt. Apo Natural Park
Home to over 800 species of flora

Philippines faces a myriad of environmental issues everyday

Reclamation projects, nuclear plant revival 'top threats to PH environment'

Local gov't, residents of Brooke's Point call on DENR to stop operations of mining firm

Filipino fishers, anti-nuke activists oppose release of Fukushima water to ocean

Defending the environment in PH: Killings, attacks escalate risks

PhilSA, DOST prepare satellites to monitor El Niño

Police break up barricade of Sibuyan residents resisting mining ops

Sources: The Philippine Daily Inquirer; The Philippine Star

Other Materials

Naturally, law clinics started to specialize in environmental justice, less than four years after the approval of the Revised Law Student Practice Rule



Law Clinics
Specializing in
Environmental Justice

University of Cebu Law's Green Legal Aid Clinic

Advocacy

- Cyber-libel complaint against an advocate arising from a social media post on destruction being caused by quarry operations in her area dismissed as a Strategic Lawsuit Against Public Participation (SLAPP) under Rule 6 of the Rules of Procedure for Environmental Cases
- Indefinite cancellation of a liquefied natural gas plant

University of Cebu Law's Green Legal Aid Clinic

Policy Work

- Formulation of the Mandaue Environmental Code in partnership with the Local Government of Mandaue City, Cebu

University of Cebu Law's Green Legal Aid Clinic

Capacity-building

- Training police officers on the rules for handling environmental cases
- Sharing basic legal knowledge to environmental advocates and vulnerable communities



Ateneo de Naga University College of Law Ignatian Legal Apostolate Office (ILAO)

Prevented the cutting of 71 trees for a road widening project

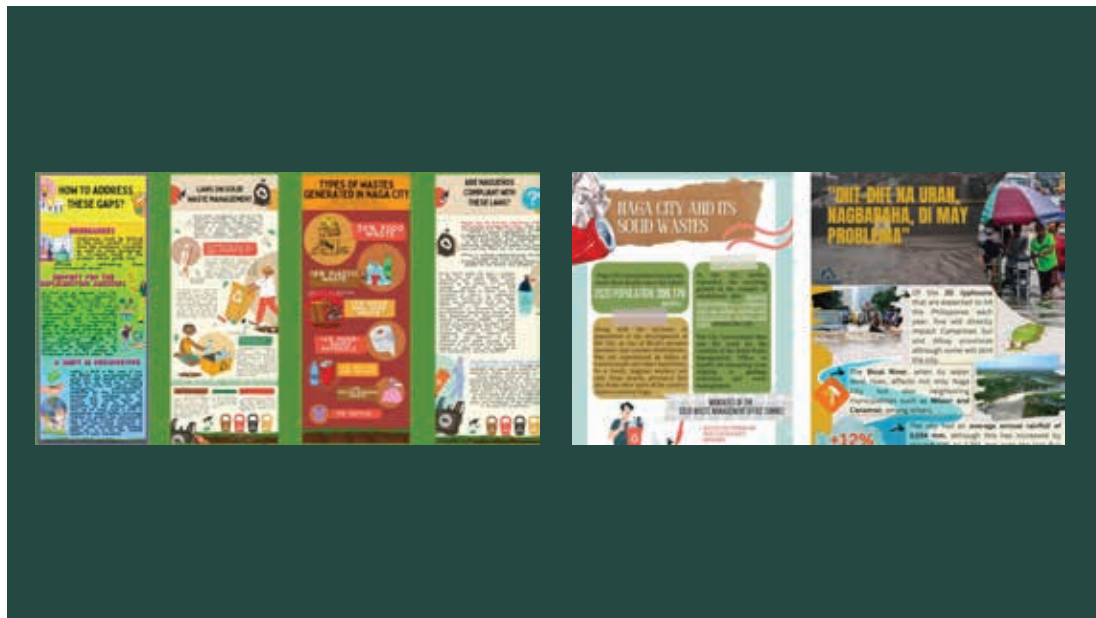
- Meetings and communications with the LGU, which resulted in the issuance of a resolution by the Sangguniang Panglungsod requiring the City Development Council to study the feasibility of implementing the road widening project while preserving the trees

Ateneo de Naga University College of Law Ignatian Legal Apostolate Office (ILAO)

Information and Education

- Produced infographics on environmental laws and ordinances
- Environmental Policy Tracker - summarized and compared the environmental policies of the national candidates

Other Materials



Ateneo de Naga University College of Law Ignatian Legal Apostolate Office (ILAO)

Partnership with the LGU

- Sits as a consultant on the Local Solid Waste Management Board of Naga City

Capacity building

- Visited 11 barangays to provide training on environmental law

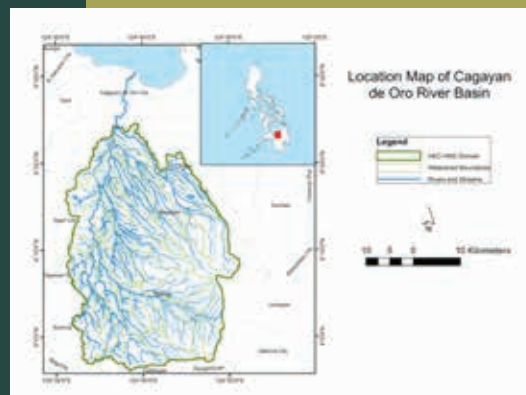


LSPs conducted their community engagement and capacity building workshop in various barangays of Naga City.

Xavier University
College of Law
Ridge-River-Reef (R3)
Law and Policy Clinic

Aim: To protect, preserve,
and enhance the
ecosystem in the ridge-
river-reef continuum

Works closely with
Cagayan de Oro River
Basin Management Council
and the Macajalar Bay
Development Alliance



SOURCE: CAGAYAN DE ORO RIVER BASIN:
DREAM FLOODING FORECASTING AND FLOOD HAZARD MAPPING

Other Materials

Xavier University College of Law Ridge-River-Reef (R3) Law and Policy Clinic

- Community-based paralegal training program for the Bantay Dagat at Bantay Gubat teams
- Assisted in Drafting the Implementing Rules and Regulations of the Payment of Ecosystem of the Municipality of Talakag, Bukidnon



R3 Clinic allowed students to connect with communities working for the protection of the forest and seas. Here, student practitioners conducted a community-based paralegal training program for the Bantay Dagat and Bantay Gubat teams. This is part of the broader effort to help preserve the CDO River Basin as part of the ridge-river-reef approach.

Conclusion

- Through CLEP, law students can become instrumental in promoting environmental justice
- CLEP brings law students face to face with the problem of access to justice and to public interest work
- CLEP raises consciousness among students as to the existence and importance of less explored fields of law such as environmental law

Community Consultation and Rights to Forests in Nepal

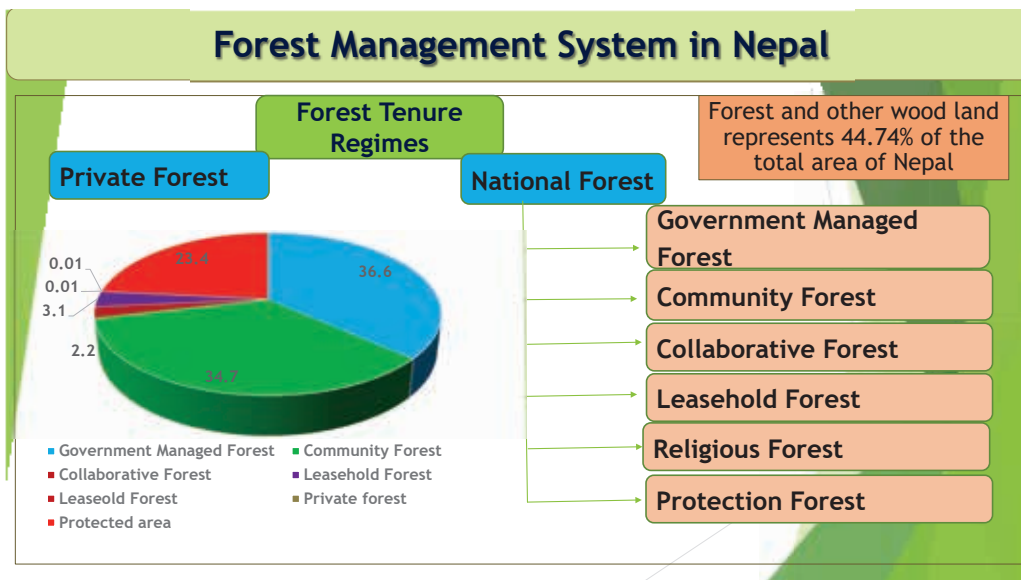


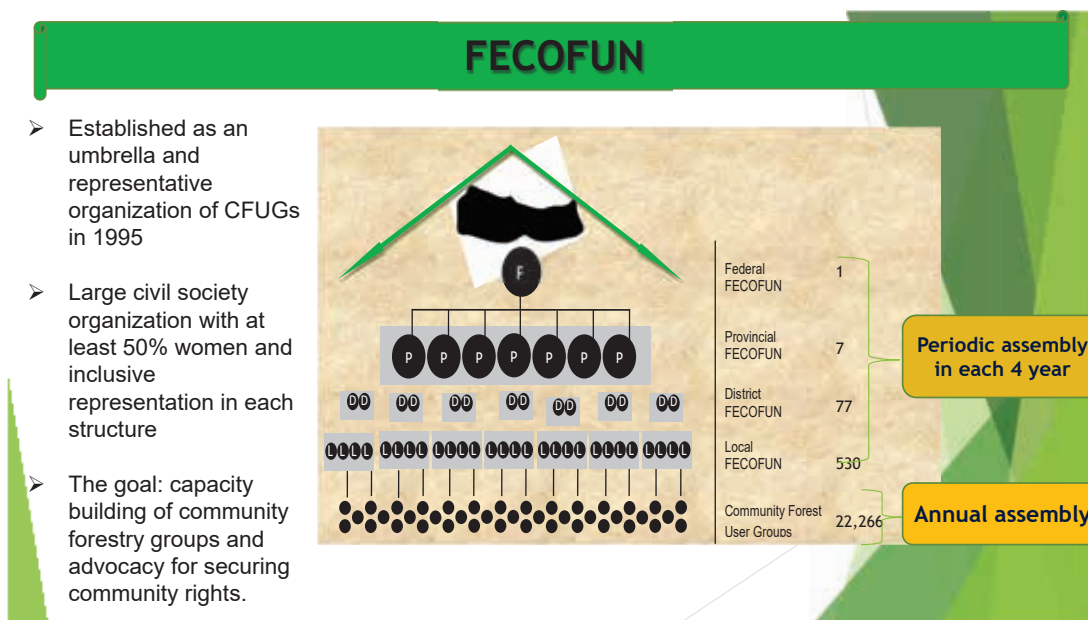
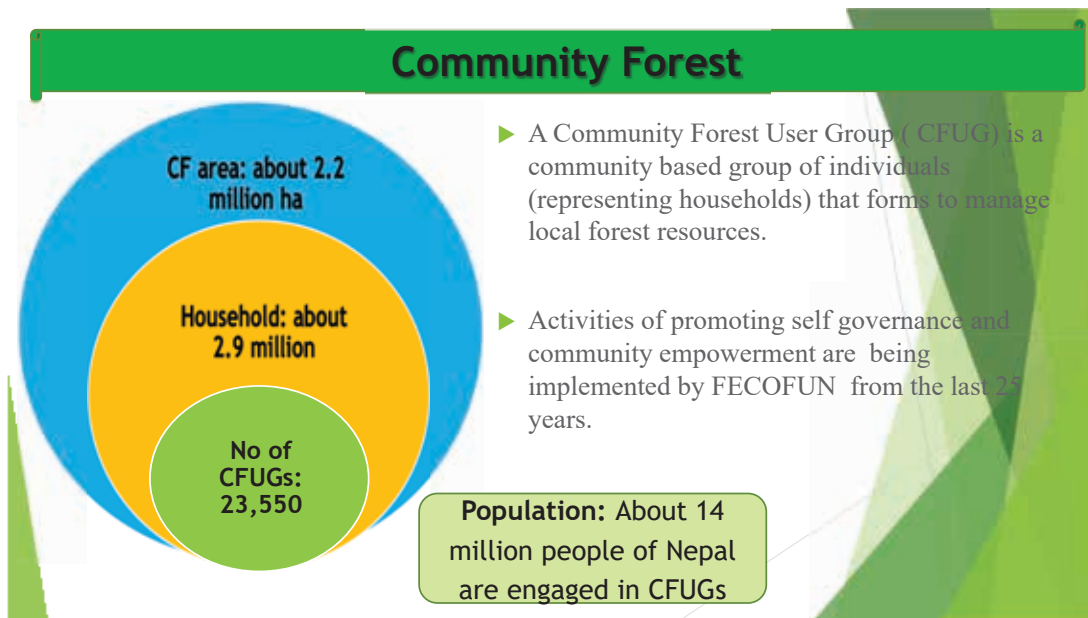
BHARATI KUMARI PATHAK

Chairperson, Federation of Community Forestry Users Nepal

Community Consultation and Forest Rights in Nepal

Bharati Pathak
Chairperson
Federation of Community Forestry Users' Nepal
Email : bharatipathak_2006@yahoo.com





Community Consultation in CF

Consultation/Participation:

- Engagement and involvement of local communities in every step of the program
- Inclusive, participatory and Democratic manner



➤ Community Consultation in CF for what ?

- Forest Protection, Management and Utilization in a sustainable manner
 - ✓ Planning process: need identification
 - ✓ Decision Making
 - ✓ Program Implementation
 - ✓ Investment and Benefit Sharing
 - ✓ Reflection, Monitoring and Evaluation

Community Forestry Rights

- Self sustaining autonomous organization
- Self-decision making
- Practice of good governance.
- Equitable benefit sharing.
- Inclusion
- Transparency



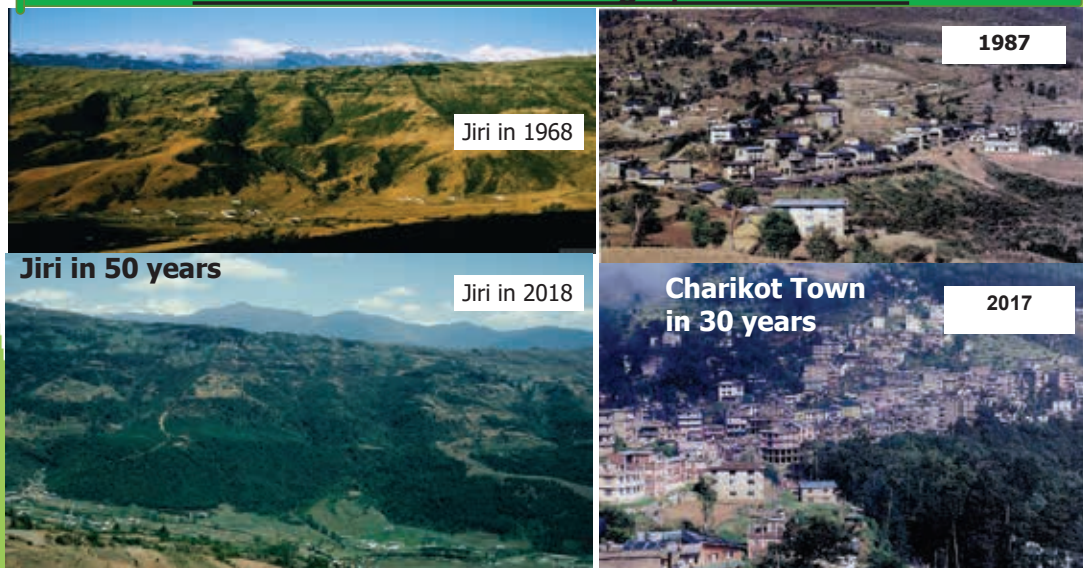
Changes/Contribution of CF

- Forest Restoration and Green recovery
- Women and community leadership
- Local economy through forest based enterprise promotion
- Water source protection
- Bio-diversity conservation
- Conservation of threatened species (flora and fauna)
- Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR)



Dolakha in 35 Years

Forest Restoration-Photographic Evidence



Achievements of Community Consultation in CF



Challenges	Way forward
<ul style="list-style-type: none"> • Expansion of protected areas • Curbing of the people's rights by the establishment of the new strict protected areas. • Land Tenure Rights • Policy hurdles for enterprise development • Delayed in new community forest handover • Backlogs of CF operational revision 	<ul style="list-style-type: none"> • Promote sustainable management of forest with full and effective participation of local communities • Allocation of sufficient resources with plan and program for the community capacity building from different level of governments. • Respect and promote community tenure rights from government agencies • Recognize community forest as community conservation and stop the expansion of protected areas • Policy/legal reform to promote forest-based enterprises and economic empowerment

Other Materials



Forest Governance and Community Engagement in Nepal



DR. YAM MALLA

Forest Governance Consultant

Forest Governance and Community Engagement in Nepal Yam Malla

Regional Symposium on Forest and Protected Areas Legislation and Jurisprudence: Bridging Law and Science

April 27-29, 2023

Marriott Hotel Kathmandu, Kathmandu, Nepal

Co-organized By

Global Judicial Institute on the Environment, The World Commission on Environmental Law, The National Judicial Academy of Nepal, the Asian Development Bank and the Judicial Academics of Bangladesh, Bhutan, India, Maldives, Pakistan and Sri Lanka

Presentation outline

- **Brief information on Nepal and its forest and related laws (2)**
- **Changed political context and implications for forest governance and CF management (2)**
- **Focus on community engagement in forestry/CF**
(Rationale for CF, changing socio-economic context, current situations of CFs - based on reports & own field observations)
- **Lessons learned from 40 years of CF in Nepal**
- **What next for CF in Nepal?**

Source: Information in this presentation draws on the following papers.

Hobley, M. & Malla, Y. 2022: Community forestry in the changing political and social context of Nepal. Routledge Handbook of Community Forestry, Routledge, London/New York

Gilmour, D. n.d. Changing Dynamics of CF in Nepal

Pokharel, B. K. 2023: Forest tenure and governance under Nepal's new federal system: a critical analysis and reflection from experiential research

Brief Info on Nepal's Physiography, Population & Forests

- Three distinct ecological zones: lowland (Terai), Hills and the Mountains
- Total population: 29.1 m (6.3 m h-holds)
- Forest area: 6.6 m ha (44.8% of the total land area) - all of this regarded as public land, owned by government
- Segmented into a range of forest categories – e.g.
 - Protected area: national parks/forest/wildlife/hunting reserves (15)
 - Conservation area (5)
 - Buffer zone (mostly around the national parks)
 - Environmental conservation area (in Chure region) (1)
 - Protected watershed area (1), and
 - National forest (rest of the govt owned forest area).
- Parts of national forest areas - handed over to local people (communities/ groups/ institutions/ individuals) for use as community forest, leasehold forest, religious forest or private forest)

Nepal's Forest (& other related) Laws and Regulations

- National Parks & Wildlife Conservation Act 1973
- Forest Act 2019; Forest Regulations 2020
- Environmental Protection Act 2019
- Soil and Watershed Conservation Act 1982
- Various Provincial Forest Acts; Provincial Forest Regulations
- Local Government Operation Act 2017
-
- Constitution of Nepal 2015
- Intergovernmental Relations Bill; Intergovernmental Fiscal Management Act 2017
- National Natural Resource & Fiscal Commission Act 2017
- Allocation of Business Rules 2018; Unbundelling Report (Council of Ministers)
- Employee Adjustment Act 2017; Civil Service Bill
- Land Use Act 2019, Industrial Enterprise Act 2016; Agriculture Laws; water and Energy; Road & Infrastructure Development Legal Instruments

Changed Political Context of Forest Governance

Nepal has now become a federal republic country:

- It marks a radical shift from a central unitary govt to three spheres of govt – federal, provincial & local – with autonomy to set their own priorities; how & where to allocate resources.
- These processes have fundamentally transformed the forest sector with consequences of how it is governed and administered and forests are managed
- The Unbundling Report for the Council of Ministers, based on the Constitution, details which functions are specific to each govt and which are shared/concurrent. For forestry:
 - Federal govt is responsible for setting policy, laws, standards and regulations for the whole of Nepal
 - Provincial govts have the sole authority for planning, management, and utilisation of forests within the province and for setting associated policies, standards and regulations
 - Local governments have been given the functions for protection, promotion, management and regulation of community-based forest systems, plantation management, maintenance and use.
 - The Constitution and the Local Government Operation Act 2017 (LGOA) provide the only legal guidance on the functions for the forest sector in each govt sphere
 - What appear to be clear in these documents, however, is contested by the new Forest Act (2019) which continues to replicate a long history of forest legislation and mirrors the provision where, on the order of the DFO, security personnel may 'shoot the offender under the knee.' (Special Powers 57(1))
 - Lack of mechanisms to build consensus b/w federal, provincial and local govts over concurrent powers has presented challenges. Madhesh Province has been at the forefront of the legal challenge to the Forest Act (2019) against the federal govt for solely enacting a law on issues of concurrent powers.
 - The Madhesh Province has also challenged the federal govt for assertion of control over forest resources within the province jurisdiction
 - The contestation caused by the federal Forest Act continues to create legal problems for provincial and local govts

Changed Political Context of CF Management

- The federal Forest Act (2019) has also been problematic for CFUGs in terms their CF management and use.
- There has been no consideration in terms of which sphere of govt is best positioned to offer different services, include technical advisory, management, administrative, regulatory and judicial services. For example:
 - A large proportion of forest land falls under some form of community-based forest management regime. Local govts have the closest relationship to these groups, and are the most obvious sphere for provision of technical advisory services, but currently this is provided by provincial govt
 - The federal Forest Act continues the control, through DFOs (federal employees), over the CFUGs – registration, permission to operate, approval for operational plans, and powers to retake forest and cancel the CFUG
 - In contrast, the new forest policy and local govt legislation, local governments play a pivotal role with forests in their jurisdictions
 - Forest land and its availability for CF and other management is now more politically contested, as local govt struggle to find land for dev projects
 - This immediately brings them into conflict with CFUGs, who hold management control over large areas of forest land
 - There is also contradictions in the perceptions of local government and CFUGs in terms of who works under whom and who controls CFs.
 - For the local govt, CFUGs are part of the local govt, they cannot operate independently.
 - On CFUGs part, they remain ambivalent and wish to retain the autonomy protected under forest law
- This and the previous slide provide just a few examples to show how complex, contradictory and contested have forest governance become as a result of the federal Forest Act drafting without proper planning and without properly engaging other key s/holders, particularly provincial and local govts and FECOFUN
 - Feedback regarding changes to the draft bill was rarely acted on
 - Scrutiny within the parliamentary committees was limited by a lack of awareness of the implications and sensitivities of many of these issues

Rationale for Initiating Community Forestry Programme 1970s/1980s

- Reports on widespread deforested/degraded landscapes
- Deforestation/ rural land degradation problem was too big for the govt forest agency to tackle alone (without local people's cooperation)
- Almost all rural h-holds depended on farming for living
- Both forest and livestock were integral parts of the farming system
- Farmers used livestock for ploughing and producing manure (fertilizer)
- Forest provided construction timber, firewood for cooking & heating, fodder and leaf-litter for livestock feed and bedding
- Farming system involved small farmland and depended on transfer of nutrients from forests to farms
- Hence, most rural h-holds had strong vested interest in their forest and being involved in decision making of the resource
- Farming occupation was highly valued and respected

Community Forestry Development: 1980s/1990s

- Nepal govt formulated policy, legislation, rules and regulations to support CF programme and reorganised its forest dept for field implementation
- Present form of CF model was developed in the 1980s and rolled out in the 1990s through to the 2010s (initially in the hills region and then across Nepal)
- The model was based on the recognition that local forest management systems were widespread and rural h-holds were identified with their forest which they had used for generations to meet h-hold needs
- Forest dept then used these traditional institutional arrangements to develop framework to formalise CF programme and formally recognise the traditional use rights
- At present, some 2.3 million ha of forests (35% of the total forest area) have been formally handed over to 22,519 community groups to manage as CFs and involve some 6 million (or 64%) h-hold members. On average around 181 ha forest and around 105 h-hold members per CFUG.

Changing Socio-economic Context of Community Forestry

- In the last two decades or so, Nepal has been experiencing a profound change in its rural and urban settings. Increasing road connectivity, urbanisation and govt's policy to support overseas employment have led to:
 - Migration of rural people – mostly active men & women to foreign countries, and internally from rural to urban, and from the hills to the Terai for jobs
 - Major agrarian change (remittance economy)
 - Shortage of labour for farming and other rural activities
 - Abandoning farmland and decreasing farm animal numbers
 - Declining interest in farming
 - Declining interest in forestry and being part of CFUGs
 - Increasing trend of the rural migrants to utilise remittances/savings to buy properties in urban centres and settle there permanently

Current Situations of CFs on the Ground: Some Field Observations

- Most rural h-holds no longer depend on forest products to support their farmland (animal manure to chemical fertilizer, oxen to tractors, firewood to LPG). Most h-holds no longer depend on agriculture and forestry for most of their income.
- H-holds now have multiple, diverse sources of income (off-farm cash income, remittances)
- Due to regeneration of trees on the abandoned farmland, most rural h-holds now have sufficient trees on their private farmlands to meet the h-hold needs, and do not depend on CFs.
- There is declining interest in being involved in CF and CFUG activities.
 - Active members, who previously played lead role to promote CF, have either moved to cities or joined political parties. The remaining aged men and women neither have capacity nor interest to steward their CFs.
 - Many CFUGs reported that they have not had their committee or general assembly meetings for years. They don't even remember when they last went to their CFs to gather forest products!
- Thus, CF programme seems to have lost its relevance for these rural h-holds.

Lessons Learned from 40 Years of CF in Nepal

- CF has evolved as a robust community based natural resource management institution, with legally supported devolution of forest rights to local communities
- CF institutions have been very successful in reversing the forest degradation and providing benefits for h-hold uses
- CF institutions demonstrated how the principles of democratic governance can be applied practically in the governance of CFs, but are now facing new challenges in the changed context
- Poor and other marginalised groups have been unable to benefit as much as other h-hold members from the CF programme, and possibly some of them may have been further marginalised
- The nexus between forest officials and the timber contractors in the sale and transport of forest products, from both community and private forests, disadvantages the state, private forest owners and CFUGs (especially the poorer and marginalised h-holds)
- Overall, In addition to reversing the forest degradation trend, CF institutions have been very successful in building the social, institutional and natural resource foundations, but they failed to promote active management of CFs and create market oriented benefits and contributing to improved livelihoods and social equity, thereby to the overall village, rural and national economies.

Future Strategic Actions for CF in Nepal

- The major changes in livelihoods, the decreased dependence on forests, and the new political system all require CF to change to respond positively to new dynamics.
- There is a need to redesign and reframe CF to fit into the changed context, including the new institutional settings associated with the federal structure.
- CFUG governance and CF management planning need to be revisited to ensure they fit for the purpose in the changed context, taking account of CFUGs' changed interests in management outcomes
- Strong private sector engagement focused on marketing is critical if community and private forests are to contribute significantly to local and national economies
- Forests as a productive economic resource may continue to play a useful role in rural livelihoods, but only when there are conducive legal and regulatory frameworks that enable the development of enterprise and markets.

Thank you

yambmalla2010@gmail.com

Science and Technology Innovations: Double Helix (DNA Mapping of Forests)



DARREN THOMAS
CEO / Senior Consultant Doublehelix

DoubleHelix

Science and Technology Innovations
DNA mapping and other scientific methods

Darren A. Thomas, CEO
28 April 2023

It's in our nature

Introducing DoubleHelix | 2

Digital

- sourcemap
- iov42
- TIFaundry

Scientific

- WORLD FOREST ID
- THE UNIVERSITY OF ADELAIDE
- agroisolab

Technical assessment & Certification

- envirosense
- ISCC
- PEFC

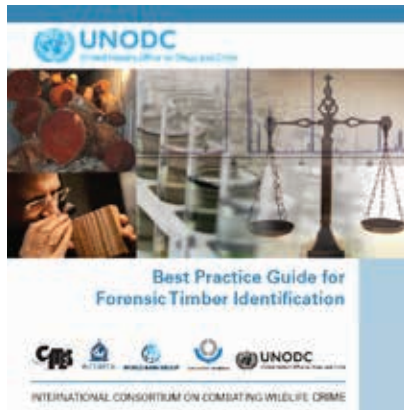
A comprehensive set of services built through partnerships

DoubleHelix

Crash course

3

https://www.unodc.org/documents/Wildlife/Guide_Timber.pdf



Crash course

4

Scientific testing methods

Verify claims of	DNA analysis	Stable isotopes	Wood anatomy
Species	✓	✗	✓ ¹
Origin	✓	✓	✗ ²
	Different parts of a tree's DNA can tell us about its species and origin, even down to individual trees if necessary.	Trees absorb different levels of chemical isotopes from the air, water and soil depending on the geographic location.	Wood anatomists can determine the genus or sometimes the species of wood by examining the wood's cellular structure.

¹ To genus level and in some cases species level

² In cases where a species or genus is endemic to a particular geographic location a determination of origin can be made



Use of DNA in legal cases Bigleaf maple theft in the United States



- US Lacey Act (2008)
- Pioneering case in 2015
- Building of reference database
[DoubleHelix](#),
[University of Adelaide](#),
[US Forest Service](#),
[World Resources Institute](#)
- Application of DNA Fingerprinting method



Use of DNA in legal cases Bigleaf maple theft in the United States



American Forest Service
 2015-2016 Annual Report
 TECHNICAL REPORT

A set of 264 SNP and ENDEL markers for Bigleaf maple (*Acer macrophyllum* Pursh)

R. E. Jordan¹, S. E. Dwyer², K. L. van Dine³, K. M. Hoad³, B. Danks⁴, A. J. Ford¹

Received: 1 August 2015; Accepted: 10 August 2015
 © Springer Science+Business Media Dordrecht 2015



Building up reference data

7

Reference database expansion



Building up reference data

8

Reference database expansion



SAMPLES COLLECTED TO DATE

31,370

SPECIES COLLECTED TO DATE

347

EXPEDITIONS TO DATE

77

COUNTRIES VISITED TO DATE

44

COMMODITIES COLLECTED TO DATE

timber, cocoa, soy



Case study: Industry adoption

9

European oak flooring, produced in China, sold in the UK (UK Timber Regulation)

Product

Plywood of oak face, SPF core, pine base

Source claim

Western Europe PEFC-certified sources

Risks identified

Species / origin mixing

Mitigation

- Raw material verification
- Regular production audits
- Isotope testing to verify W. European origin of harvest



 Double Helix

Case study: Industry adoption

10

Integration with Myanmar certification system

Product

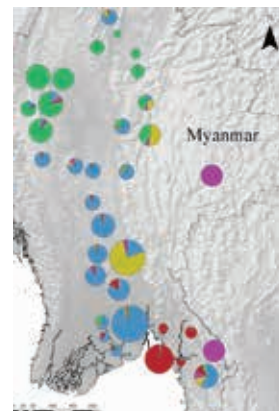
Myanmar teak logs and sawn timber exported to the EU and USA

Risks identified

- Low trust in Myanmar government documentation
- Potential for source mixing
- Difficult to exclude controversial sources (confiscated timber)

Mitigation

- Regular onsite audits
- DNA testing to verify document claims of origin
- DNA testing to verify Chain of Custody documentation



 Double Helix

Current applications

Regulatory enforcement

- United States Lacey Act

Market monitoring

- EUTR Competent Authorities
- Australian Federal and State Governments (Sandalwood)

By industry to demonstrate Due Diligence

- United States Lacey Act
- European Union Timber Regulation → **Deforestation Regulation**



Double Helix Tracking Technologies Pte Ltd

www.doublehelixtracking.com

info@doublehelixtracking.com

+65 6227 9706

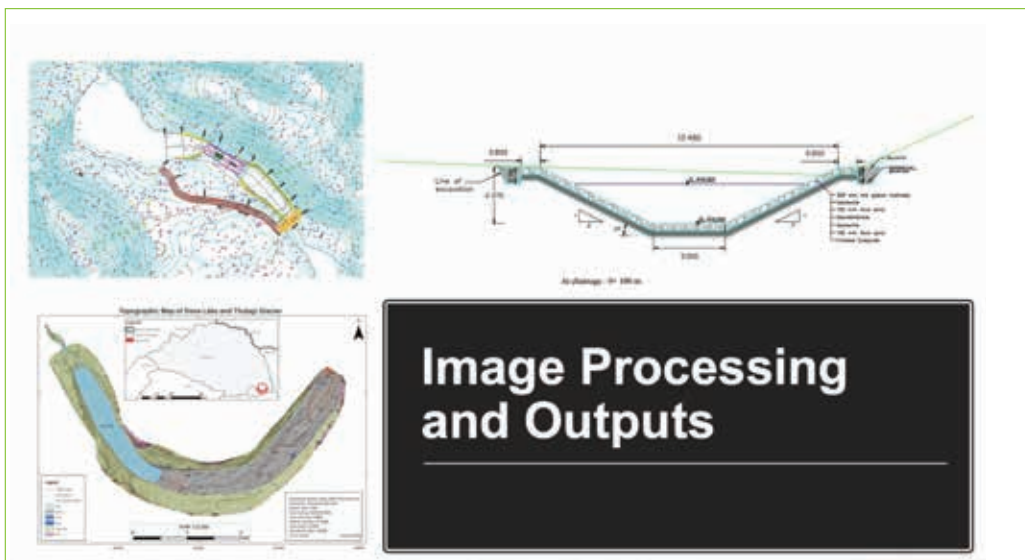
Science and Technology Innovations: Nepal Flying Labs



MARTIN COSIER

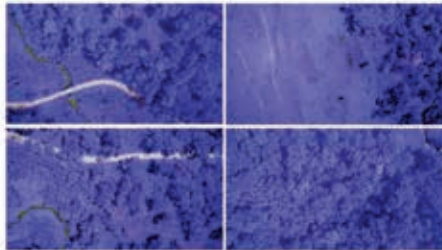
Environment and Climate Change Law Specialist (Consultant), ADB

Drone Based Aerial Mapping to support Glacial Lake lowering plans



Forestry

Drones for Biomass Estimation



TRA HIGH AIR FOREST,

¹Department of Geomatics Engineering, School of Engineering, Kathmandu University, Nepal, shrestha.ashish@ku.edu.np
²Department of Urban and Water Engineering, School of Engineering, Kathmandu University, Nepal, shrestha.ashish@ku.edu.np

Chandana C, NCSU & Chandana P, NCSU

KEY WORDS: Forest Biomass, UAV, Image Segmentation, Visible-NIR Images

ABSTRACT:

Forest biomass is the size of above-ground living organic material contained in trees which is measured in dry weight per unit land. Forest biomass acts as substantial terrestrial carbon sinks, they are estimated to absorb 1.7 Petagrams of carbon per year, so such accurate estimation of forest carbon could in turn improve the estimation of biomass carbon footprint because of its application in commercial applications as well as in global carbon cycle. Particularly in the forest sector, the assessment of the total above-ground biomass (AGB) with sufficient accuracy is vital in supporting the global and national goal of forest under the United Nations Framework Convention on Climate Change (UNFCCC), Reducing Emissions from Deforestation and Forest Degradation (REDD+). In this research, two images, RGB and drone-captured visible-near-infrared (VNIR) images, together with high-resolution (10m) digital elevation model (DEM) data, were used to estimate forest biomass. A deep learning-based neural network (CNN) was developed. The paper presents results from the evaluation of forest biomass estimation using the proposed method. The results show that the proposed method

Tree Plantation Drones



Managing Satellite and Other Data Evidence



JUSTICE RACHEL PEPPER

Land and Environment Court of New South Wales



Remote sensing

Remote sensing is the science and technology by which properties of specified objects, areas or phenomena can be identified, measured and analysed without direct contact with them in order to make useful decisions.

There are three major remote sensing platforms:

- ground-level/sea level platforms (towers and cranes), sonar and ocean mapping and single beam and multibeam echosounders (attached to boats/watercraft)



- aerial platforms (helicopters, low altitude aircraft, high altitude aircraft, drones), and



- spaceborne platforms (space shuttles, polar-orbiting satellites, and geostationary satellites).



Aerial photography

- Aerial photography is the oldest form of remote sensing.
- Aerial photography can provide black-and-white, colour, or colour-infrared data in either film or digital form.
- Aerial photography is conducted by manned or unmanned airborne platforms, such as fixed wing aircraft and Unmanned Aerial Vehicles (UAV) or drones.
- Aerial photography is often flown at lower altitudes, thereby capturing more detail, such as buildings, stands of trees, bodies of water etc, which is useful for visual interpretation.

2

Uses of aerial photography

- Used in *Environment Protection Authority v Maules Creek Coal Pty Ltd* [2022] NSWLEC 33 (Pepper J)
 - The defendant company pleaded guilty to three offences for polluting waters with sediment and expanded polystyrene beads at the Maules Creek mine. Google Earth images were used in evidence and the judgment to show the boundaries of the mine and the discharge into the creek.
 - **Result:** the company was fined \$158,750 and was ordered to place a notice in four newspapers.
- *Water NSW v Kiangatha Holdings Pty Limited; Water NSW v Laurence Natale* [2022] NSWLEC 6 at [49] (Robson J)
 - The defendants were charged with two offences relating to the pollution of water during the construction of a dirt road. The prosecutor, Water NSW, sought leave to rely upon proposed amended summonses, which included attachments of aerial maps that identified approximate locations where the pollutant entered waters.
 - **Result:** the Court found that legislation empowered the officers of Water NSW to obtain the aerial map materials and did not constitute unfair or disentitling conduct: at [215].



3

Other Materials

The diagram illustrates the process of satellite remote sensing. On the right, the Sun emits 'Incident Solar Radiation' (red arrows) towards the Earth's surface. The Earth's surface is divided into several zones: 'Forest' (green trees), 'Water' (blue), 'Grass' (green), 'Bare Soil' (tan), 'Paved Road' (grey), and 'Built-up Area' (yellow house and grey buildings). The radiation is reflected back towards a 'Satellite' in orbit on the left as 'Reflected Solar Radiation' (red arrows). The 'Atmosphere' is shown as a layer between the surface and the satellite, with arrows indicating the path of the radiation.

Satellite imagery

Satellite systems use optical remote sensing.

Optical remote sensing uses visible, near infrared and short-wave infrared sensors to form images of the Earth's surface by detecting the solar radiation reflected from targets on the ground.

Different materials reflect and absorb differently at different wavelengths. This means that the targets can be differentiated by their spectral reflectance signatures.

4

Panchromatic imaging system: SPOT

The sensor is a single channel detector sensitive to radiation within a broad wavelength range. If the wavelength range coincides with the visible range, then the resulting image resembles a "black-and-white" photograph taken from space. The physical quantity being measured is the apparent brightness of the targets. The spectral information or "colour" of the targets is lost.

Eg SPOT (Satellite Pour l'Observation de la Terre)

- NSW Department of Environment uses SPOT to map, investigate and prosecute criminal offences in the Court relating to clearing of native vegetation (woody vegetation change) and compares to current aerial and satellite images.

Comparative SPOT images depicts large decreasing trends in vegetation (dark green)

5

Use of panchromatic imaging: SPOT

- *Director-General, Department of Environment and Climate Change v Walker Corporation Pty Limited (No 2)* [2010] NSWLEC 73:
 - The defendant was charged with clearing of native vegetation in breach of s 12(1) of the *Native Vegetation Act 2003* (NSW) (NV Act). The prosecutor relied on SPOT 5 satellite imaging and aerial photography to demonstrate that clearing had taken place on the defendant's property. Peppier J accepted the reliability and accuracy of this evidence at trial, and concluded that native vegetation was unlawfully cleared on the property. This decision was affirmed in *Walker Corporation Pty Limited v Director-General, Department of Environment, Climate Change and Water* [2012] NSWCCA 210.
- *Department of Environment and Climate Change v Olmwood Pty Limited* [2010] NSWLEC 15:
 - Pain J held that the prosecutor had established beyond reasonable doubt that the defendant had unlawfully cleared native vegetation in breach of s 12(1) of the NV Act. Pain J relied on the opinions of the prosecutor's experts in relation to aerial photograph and satellite image interpretation, including SPOT 5 image analysis, to reach this conclusion.
- *Rummery v Chief Executive, Office of Environment and Heritage* [2014] NSWCCA 106:
 - The defendant pleaded guilty to an offence against s 12(1) of the NV Act for clearing native vegetation otherwise than in accordance with a development consent or property vegetation plan. He disputed the area of illegal clearing and the number of trees cleared, amongst other matters. The trial judge convicted the defendant and imposed a fine of \$80,040. The defendant appealed the conviction and the sentence.
 - **Result:** The Court of Appeal dismissed the appeal from conviction but reduced the fine. Expert evidence based on aerial photograph and satellite image interpretation, including SPOT 5 imagery, was accepted for determining the extent of clearing.

6

Multispectral imaging system: LANDSAT

- The sensor is a multichannel detector with a few spectral bands.
- Each channel is sensitive to radiation within a narrow wavelength band.
- The resulting image is a multilayer image which contains both the brightness and spectral (colour) information of the targets being observed.

LANDSAT

- The LANDSAT program is the longest-running enterprise for acquisition of satellite imagery of Earth. LANDSAT data is collected using an instrument mounted on a satellite which orbits the globe, continuously collecting images.
- LANDSAT have nine satellites
- LANDSAT satellites have the optimal ground resolution and spectral bands to efficiently track land use and to document land change due to climate change, urbanization, drought, wildfire, biomass changes, and a host of other natural and human-caused changes.
- The NSW Department of Environment uses the entire 30-year archive of LANDSAT satellite imagery to map, investigate and prosecute criminal offences relating to clearing of native vegetation.
- The Office of Environment and Heritage relied on LANDSAT Multi-Spectral imaging in the following cases:
 - *Chief Executive of the Office of Environment and Heritage v Grant Wesley Turnbull* [2017] NSWLEC 141 (sentence);
 - upheld on appeal in *Turnbull v Chief Executive of the Office of Environment and Heritage* [2018] NSWCCA 229;
 - *Chief Executive, Office of Environment and Heritage v Grant Wesley Turnbull (No 3)* [2019] NSWLEC 165.
 - The defendant pleaded not guilty to a charge of unlawful clearing of native vegetation. The expert relied on LANDSAT images of the land, trees and groundcover to show whether there had been clearing during the relevant period.

7

Other remote sensing technologies

Radar

Light detection and ranging (LiDAR)

Multi-beam echo sounder

Ground penetrating radar

Remote sensing for conservation

8

LiDAR

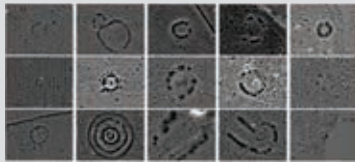
- o LiDAR, which stands for Light Detection and Ranging, is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth. These light pulses—combined with other data recorded by the airborne system — generate precise, three-dimensional information about the shape of the Earth and its surface characteristics.
- o Airplanes and helicopters are the most commonly used platforms for acquiring lidar data over broad areas, however, LiDAR can be attached to satellites, planes or drones.
- o *Planners North v Ballina Shire Council* [2021] NSWLEC 120
 - o The applicant appealed a refusal of a development application for a manufactured home estate partly located on coastal wetlands and littoral rainforest areas.
 - o Survey information was overlaid on top of LiDAR imagery to establish tidal and flood zones across the site and the adjacent biodiversity banking area.



9

Ground penetrating radar

- Ground Penetrating Radar (GPR) works by emitting a pulse into the ground and recording the echoes that result from subsurface objects. GPR imaging devices also detect variation in the composition of the ground material.
- In *Sutherland No. 7 Pty Limited v Ku-ring-gai Council* [2021] NSWLEC 1209, GPR evidence was used in addition to the arborists' joint expert report to map the site and tree roots associated with a tree protection zone.
- In *Boomerang & Blueys Residents Group Inc v New South Wales Minister for the Environment, Heritage and Local Government and MidCoast Council (No 2)* [2019] NSWLEC 202, there was an association that challenged the validity of the Council's Coastal Management Plan, which categorised coastal hazards as "immediate, intolerable risk" and "extreme or high risk". GPR evidence was used to establish the strength of bedrock substrate under the development site for a proposed beach development.



Images of Stonehenge using GPR
See: M.D. Espig, 'Stonehenge secrets revealed by underground map' (2014)
BBC Online: <https://www.bbc.com/news/science-environment-29126854>

10

Interpretation and analysis of remote sensing imagery and data

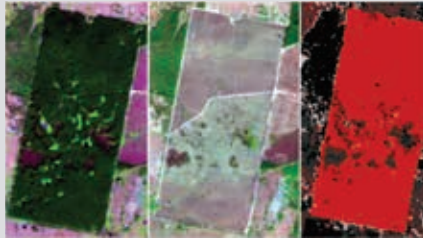
- The remote sensing imagery and data are useful tools for assessment and decision-making tasks. They can be used for environmental studies, including describing and mapping:
 - the environment, such as the presence, distribution and abundance of species, populations of species or ecological communities, in both terrestrial and marine environments;
 - the impacts on the environment, such as deforestation, desertification, degradation of the environment, loss of habitat and invasive species; and
 - resource exploitation, such as illegal mining, logging or fishing.

11

Identifying illegal clearing

In NSW, prosecutors often use satellite imagery to map, investigate and prosecute land clearing of native vegetation under the:

- Biodiversity Conservation Act 2016 (NSW); and
- Native Vegetation Act 2003 (NSW)
- Examples include:
 - Department of Environment and Climate Change v Olmwood Pty Limited [2010] NSWLEC 15
 - Rummery v Chief Executive, Office of Environment and Heritage [2014] NSWCCA 106
 - Chief Executive, Office of Environment and Heritage v Grant Wesley Turnbull (No 3) [2019] NSWLEC 165
 - Secretary, Department of Planning, Industry and Environment v Auen Grain Pty Ltd; Merrywinebone Pty Ltd; Greenfree; Harris (No 2) [2020] NSWLEC 126, where Robson J held that the expert evidence of two witnesses, which included aerial photographs of vegetation changes, were admissible in relation to proceedings concerning 32 charges of alleged land clearing.



12

Identifying illegal activities

- Remote sensing satellite technology has been used to monitor illegal logging in the Peruvian Amazon.



13

Issues that arise with remote sensing evidence

Authenticity of evidence

Quality of evidence

Validity of pre- and post-processing correction

Validity of interpretation and analysis

14

Authenticity of evidence

- Challenge may be made to the authenticity and identity of the aerial photographic or satellite imagery.
- A party may adduce evidence of the contents of the imagery by tendering an imagery document that was or purports to have been produced by the remote sensing instruments and technology: *Evidence Act 1995 (NSW)*, s 48(1)(d).
- The court may examine the imagery and draw any reasonable inference from it, including an inference as to its authenticity or identity: *Evidence Act 1995 (NSW)*, s 58(1).
- If the authenticity or identity of the imagery is not able to be established by drawing inferences from the face of the document, its provenance may need to be established by other evidence, eg a deposition/affidavit/oral evidence.
- This may involve proving the remote sensing platform, instrument and technology used to generate the imagery.

15

Quality of evidence

- Challenge may be made to the quality of the imagery and the findings and inferences of fact that can be drawn from it.
- These may relate to:
 - timing of acquisition of the image;
 - spatial and spectral resolutions of the image;
 - spatial distortion of the image; and
 - interference with the image by clouds, illumination, solar angle or atmospheric effects.

16

Validity of pre- and post- processing of images

- Challenges may be made to the pre-processing of images, including to address:
 - the presence of clouds and cloud shadows and correction by creating a composite image from multi-temporal images;
 - the issue of light penetration in water and water column correction methods;
 - light scattering and atmospheric correction;
 - masking by removal of geographic areas that are not useful or usable;
 - sunglint and its removal from the image;
 - geometric correction, such as by geo-referencing to GPS coordinates on the ground or removal of spatial distortion from an image or drawing a parallel between two different sources of remote sensing data; or
 - radiometric correction, particularly of multi-temporal images of the same place.
- Challenge may be made to post-processing of images, such as contextual editing.

17

Challenges to geometric correction

- In *Water NSW v Kiangatha Holdings Pty Limited; Water NSW v Laurence Natale* [2022] NSWLEC 6, the defendants were charged with two offences for the pollution of water during the construction of a dirt road.
 - The defendant challenged the lawfulness of the prosecutor's taking of aerial photography by drones and hence the production of composite aerial maps: at [123]-[129].
 - Zooming in on sites in aerial photography from SixMaps at a scale of 1:100,000 produced a margin of error, causing certain landscape features not to align with GPS data of the road and drainage lines with reasonable accuracy: at [49].
 - To obtain more accurate aerial imagery, the sites were photographed by drones overflying the sites: at [50].
 - Further detailed GPS surveying of the drainage lines and road was undertaken: at [50].
 - The aerial photography was geometrically corrected by overlaying the Six Maps aerial photography with the drone aerial photography, and geo-referencing the GPS survey data of elements on the sites: at [50].
 - **Result:** Robson J found that the prosecutor was statutorily entitled to enter the defendant's property to take the aerial photography by drones. Composite aerial maps were therefore produced without trespass and were able to be used: at [214].

18

Validity of interpretation and analysis


- Even if the imagery is sound, the opinions that experts draw from that imagery may differ
- Challenge may be made to the experts' methodology and reasoning for their different opinions drawn from the imagery:
 - *Secretary, Department of Planning, Industry and Environment v Aven Grain Pty Ltd; Merrywinebone Pty Ltd; Greentree; Harris (No 2)* [2020] NSWLEC 126 at [50]-[75]
 - The defendants challenged the admissibility of the expert evidence of two witnesses, which included aerial photographs of vegetation changes, in relation to proceedings concerning 32 charges of land clearing.
 - **Result:** the first expert, a Remote Sensing Scientist, held an admissible opinion which related to the changes in vegetation, because it was based upon his analysis and interpretation of the aerial photographs and satellite images gained from his training, study and experience.
 - **Result:** the second expert, an ecologist and zoologist, also held an admissible opinion, despite him relying on the aerial photography of the first expert and not being a member of a professional body.
 - *Chief Executive of the Office of Environment and Heritage v Cory Ian Turnbull* [2017] NSWLEC 140
 - *Chief Executive of the Office of Environmental and Heritage v Grant Wesley Turnbull* [2017] NSWLEC 141

19

Conclusion

- Remote sensing is increasingly being used to identify, measure and analyse objects, areas and phenomena in the environment, human activities in the environment, and the impacts of activities on the environment.
- Remote sensing imagery and data are also increasingly being used as evidence in court.
- Understanding the nature, purpose and types of remote sensing systems, imagery and data, and their strengths and limitations, will improve the utility and effectiveness of this evidence.

20



Worm's eye view of a lush forest. Forests are often called the lungs of the earth because they release oxygen to the atmosphere (photo by Johnatan Misael/Unsplash).



The Beeshazari Tal in Nepal is a protected wetland located in buffer zone of the Chitwan National Park (photo by Ashok Sharma/Unsplash).



13

**ABOUT
THE SPEAKERS**

About the Speakers



Justice Baidya Nath Upadhyay

Executive Director,
National Judicial Academy of Nepal

Justice Baidya Nath Upadhyay enrolled as a practicing Advocate in the Supreme Court of Nepal in September 1978. During his practice, he served both as Executive Member and Executive Secretary in the Supreme Court Bar Association. He had conducted legal aid programs and several legal awareness programs for needy and poor women through NGOs like Women Legal Services Project and Services for the Underprivileged Section of Society.

He was appointed as a judge of the Court of Appeal in 1991. He also led Revenue Tribunal at Kathmandu and Pokhara as a chairperson during his judgeship. He served as the Chief Judge of the Court of Appeal, Patan, and the Court of Appeal, Rajbiraj from 2005 to 2010. He was appointed as a Justice of the Supreme Court of Nepal in December 2010. During his tenure at the Supreme Court, he also served as a chairperson for Mediation Council. He retired in January 2016.

Currently, he is the Executive Director of the National Judicial Academy, Nepal.

He attended international programs on many themes including environmental justice conducted in different countries as a speaker or as a participant.



Arnaud Heckmann

Principal Portfolio Management Specialist (Head),
Nepal Resident Mission, Asian Development Bank

Arnaud Heckmann is Head of the Portfolio Management Unit at the ADB Nepal Resident Mission. He was formerly Principal Urban Development Specialist at ADB's East Asia Urban and Social Sectors Division. He has extensive experience in designing, processing, and administering integrated economic and urban development projects and technical assistances that promote transformative approaches, inclusive and green livable cities, climate change adaptation and mitigation, environmental sustainability, and green urban-rural development. Before joining ADB, he worked with various international organizations as project team leader on urban and regional development planning and infrastructure investments.

He holds a master's degree in comparative development research from EHESS (Paris School of High Study in Social Science), a master's degree in human geography from Toulouse University, and a diploma in Chinese language and culture from Paris University. He is currently based in Kathmandu, Nepal.



Justice Antonio Herman Benjamin

President, National High Court of Brazil (STJ),
President of the Global Judicial Institute on the Environment,
Chair Emeritus, International Union for Conservation of Nature
World Commission on Environmental Law

Appointed Justice of the National High Court of Brazil (STJ) in 2006 by President Luiz Inácio Lula da Silva, Professor Benjamin is the president of the Global Judicial Institute on the Environment (GJIE) – the organization that brings together Supreme Court Justices and judges from around the world who work with Environmental Law. He is a former president of the International Union for Conservation of Nature (IUCN) World Commission on Environmental Law (WCEL). Justice Benjamin has authored, co-authored, and edited over thirty books and articles in Brazil and abroad. He is a Knight (Chevalier) of the National Order of the Legion of Honour (Ordre National de la Légion d'Honneur) of France and a Commander (Commandeur) of the Order of King Leopold of Belgium. He is also a Goodwill Ambassador for Environmental Justice of the Organization of American States – OAS. In 2020, Brazilian scientists named after him a newly discovered species of orchid from the Amazon Rain Forest – *Bulbophyllum antoniobenzaminii*.



Justice Sapana Pradhan Malla

Supreme Court of Nepal

Justice Sapana Pradhan Malla is a judge of the Supreme Court of Nepal. She was also a member of the first Constituent Assembly of Nepal, which negotiated and drafted the new Constitution of Nepal. The constitution is remarkable for recognizing the right to a clean environment as a fundamental right.

She was part of the bench in several landmark decisions relating to environmental issues in Nepal, such as (i) the case involving the conservation of the Fewa Lake watershed located in

About the Speakers

the Pokhara Valley, where the court issued an order for reclamation of illegally encroached land, and (ii) the case where the court upheld a municipality's plastic ban. Justice Malla has also given directives to ensure the government's implementation of policies and programs which uphold the right to a clean and healthy environment, as enshrined in the Constitution of Nepal.

Justice Malla was a public interest lawyer prior to her appointment to the Supreme Court. She handled cases involving a wide range of issues, from the environment (e.g., water pollution, pesticides, and Godavari marble) to civil rights (e.g., right to inheritance, reproductive health rights, marital rape, and witness protection).

Justice Malla is a member of the International Union for Conservation of Nature (IUCN) World Commission on Environmental Law (WCEL) and currently serves as the founding Secretary General of the Global Judicial Institution on the Environment.

She holds a Master in Comparative Law from Delhi University and a Mid-Career Master in Public Administration from Harvard University.



Acting Chief Justice Hari Krishna Karki
Supreme Court of Nepal

Acting Chief Justice Hari Krishna Karki of the Supreme Court of Nepal, was born in Okhaldunga, Nepal on September 10, 1958. He graduated in 1983 with a Diploma in Law from Tribhuvan University and practiced law as an advocate in various courts of Nepal including the Supreme Court of Nepal from 1983.

Acting Chief Justice Karki was awarded the title of Senior Advocate in 2013 and was elected as President of the Nepal Bar Association in the same year. In 2015, he was appointed as the Attorney General of Nepal with the additional responsibility to hold the office of President of the Nepal Bar Council and Notary Public Council along with serving as a Member of the Judicial Service Commission.

Acting Chief Justice Karki was appointed as a Justice of the Supreme Court of Nepal in 2016. Currently, he also serves as a member of the Judicial Service Commission and the Judicial Council of Nepal.



Christina Pak

Principal Counsel and Team Leader,
Law and Policy Reform, Asian Development Bank

Christina Pak specializes in international development finance, law and policy reform, dispute resolution, and ESG standards and drives thought leadership on sustainable development issues. She is currently Principal Counsel of the ADB and manages the Office of General Counsel's Law and Policy Reform Program which designs and implements legal and judicial reform technical assistance projects across the Asia and the Pacific region. Ms. Pak oversees a diverse portfolio in the areas of environmental protection and climate change, gender equality, private sector development, public-private partnerships, and digital economy. She also serves as ADB's Accountability Mechanism Policy Counsel advising the Board of Directors, the Office of the Compliance Review Panel, and the Office of the Special Project Facilitator. In her previous role as a project counsel at ADB, Ms. Pak worked on complex multi-sector projects in Central Asia, Southeast Asia, and East Asia regions. She is currently a Steering Committee Member of the International Union for Conservation of Nature (IUCN) World Commission on Environmental Law (WCEL) and a Member of the Chartered Institute of Arbitrators. Ms. Pak is a US-qualified lawyer, admitted in the States of New York and New Jersey.



Christina Voigt

Professor, Oslo University School of Law,
Chair, International Union for Conservation of Nature
World Commission on Environmental Law

Christina Voigt is Professor of Law at the University of Oslo, Norway. She is an internationally renowned expert in international environmental law and teaches, speaks, and publishes widely on legal issues of climate change, environmental multilateralism, and sustainability.

From 2009-2018, she worked as principal legal adviser for the Government of Norway in the UN climate negotiations and negotiated the Paris Agreement and its Rulebook.

Professor Voigt is Chair of the IUCN WCEL and Co-chair of the Paris Agreement Implementation and Compliance Committee.

About the Speakers



Bill Maynard

Forestry Practitioner

Bill Maynard has worked in forest management for over 30 years, mainly in Southeast Asia. He was involved as an auditor on a number of the first forest certification audits across Asia and the Pacific, from Sri Lanka to the Solomon Islands and Japan to Indonesia and countries in between. This led to work in defining the “legality standard” for timber in a number of countries, going through legislation identifying what parts of the law timber producers specifically needed to demonstrate compliance with voluntary certification requirements. Mr. Maynard is familiar with how the laws and regulations in a wide range of countries are administered outside the court system.

For him, being in the forest, working directly with the communities that depend on the forest resource has been the most enjoyable part of his professional life. Ensuring that these groups have fair access to the social, legal, and environmental benefits they deserve as the true custodians of the environment is a pleasure and an honor. Ensuring their interests are heard is always a key goal, as is trying to find ways to support their way of life in a rapidly changing world. Many of their traditions such as slash and burn agriculture may not be compatible with current best practice so finding ways to support the transition to a more sustainable future is always the goal.



Prakash Mani Sharma

Senior Advocate; Co-Founder and Former Chairman,
Forum for Protection of Public Interest (Pro Public)

Prakash Mani Sharma has been a private interest lawyer for more than 25 years now. He is a co-founder and former Chairman of the Forum for Protection of Public Interest (Pro Public).

Mr. Sharma established Pro-Public in 1991 with a group of like-minded individuals to protect public interest and serve as an agent of social change.

Mr. Sharma started public interest litigation with the *Godavari Marble Industries* case. Pursuing the case for two decades, Mr. Sharma succeeded in convincing the Supreme Court that the Godavari area, which is rich in biodiversity and national heritage, should be closed to mining operations.

Mr. Sharma also successfully litigated cases for the protection of the Rani Pokhari lake, the Kathmandu Valley, and the Bagmati River. He also pursued cases against vehicular pollution, illegal brick kilns, and smoking in public places.

Mr. Sharma holds a masters in commercial law from Delhi University and an LLM in Environment from Lewis and Clark Law School in Oregon, USA.



Briony Eales

Judicial Capacity Team Leader for Environmental and Climate Change Law (Consultant), ADB

Briony Eales is the team leader for environmental and climate change law in the ADB's Judicial Capacity Building Program. Ms. Eales specializes in environmental, social, and governance law and was the editor-in-chief and a lead author of *Climate Change, Coming Soon to a Court Near You*, ADB's four-part climate law report series. The reports explore climate change law, policy, and litigation in Asia and the Pacific. Ms. Eales also contributed to ADB's 2021 report, *Gender-Inclusive Legislative Framework and Laws to Strengthen Women's Resilience to Climate Change and Disasters*.

Ms. Eales has advised public and private sector clients for 25 years in Australia and across Asia. Her work has included updates to national climate law, climate change strategy, and laws on environmental crime. She has also advised corporate entities on resettlement, environmental and social impacts, engaging with indigenous communities, governance, and risk.

About the Speakers



Alexander Hinrichs

Head of Asia Regional Office,
European Forest Institute

Dr. Alexander Hinrichs has more than 30 years of academic and hands-on experience in global forestry. He has worked since 1996 in international cooperation with donor, nongovernment organization, and private sector assignments. He is an expert in natural resources management, especially sustainable forest management & economics, forest sector policy, regulatory reforms (Forest Law Enforcement Governance and Trade (FLEGT)), land use planning, monitoring/audit procedures, traceability, and smallholders. After working at the University of Freiburg, Germany, he joined the German Agency for International Cooperation GmbH (GIZ). Since 2011, he has been working for the European Forest Institute, currently serving as their Head of Asia Regional Office, based in Kuala Lumpur, Malaysia. He has worked in many countries in Asia—being based in Southeast Asia for 12 years to date—the Pacific Region, Brazil, US, and Europe.



Eeshan Chaturvedi

Professor, OP Jindal Global University and Advisor,
Global Judicial Institute on the Environment

Professor Eeshan Chaturvedi (on sabbatical) is currently pursuing his PhD in Climate Law, and its correlations with policy, governance, and earth systems at Stanford University. He holds an LLM in Environmental Law and Policy from Stanford Law School and has since worked with various domestic and international organizations on legal and management issues related to the environment and climate. In academia, he has held positions of Assistant Dean and Professor of Climate Governance and continues to engage with the various stakeholders in the climate space.



Nicholas Bryner

Professor of Law,
Louisiana State University School of Law

Nicholas Bryner, Associate Professor of Law and John P. Laborde Endowed Professor in Energy Law at Louisiana State University's (LSU) Paul M. Hebert Law Center, teaches courses in environmental, natural resources, and administrative law. He holds a JD and an LLM degree in Energy and Environmental Law from The George Washington University Law School. Prior to joining LSU, Professor Bryner was an Emmett/Frankel Fellow in Environmental Law and Policy at the University of California, Los Angeles (UCLA) School of Law.

His areas of research include environmental law in the United States and Brazil; public lands and natural resources law; climate change law; energy and electricity regulation; and theory and principles of environmental law. He currently serves as Chair of the IUCN World Commission on Environmental Law's Task Force on the Global Judicial Institute on the Environment.



Henry Cornwell

Counsel, Asian Development Bank

Henry Cornwell joined ADB as counsel in 2020, supporting the operations of the Pacific and South Asia Regional Departments. He co-leads ADB's "Legal Toolkit for the Protection of Vital Ecosystems for Climate, Biodiversity, and Livelihoods" technical assistance, which seeks to understand the region's binding constraints and best practices in protecting our forests, and develop and proliferate legislative and institutional solutions to slow the pace of deforestation.

Mr. Cornwell obtained his LLB and BA from the University of New South Wales in 2016, and his Master of Public Policy from the London School of Economics in 2020. He was admitted as a solicitor in the Supreme Court of New South Wales and the High Court of Australia in 2016. Prior to joining ADB, Mr. Cornwell has worked as a finance and energy lawyer at Gilbert + Tobin in Sydney, as a researcher at the Grantham Institute in London, and as Tipstaff (Judge's Associate) to the Hon. Justice Ruth McColl AO at the NSW Court of Appeal.

About the Speakers



Harj Narulla

Barrister, Doughty Street Chambers

Harj Narulla is a UK and Australian-qualified lawyer, practicing as a climate barrister at Doughty Street Chambers in London, where he specializes in public interest climate law and litigation.

In addition to his extensive experience in climate, environmental, refugee, and indigenous law, Mr. Narulla has previously worked as an international climate negotiator representing a Pacific nation under the United Nations Framework Convention on Climate Change (UNFCCC) process and as a policy advisor in the Australian Prime Minister's Department.

Mr. Narulla is an honorary research fellow in climate law and litigation at the University of Oxford's Sustainable Law Programme, where he undertakes practice-oriented research and collaborates with nongovernment organizations, government, and international institutions.

He is also a Visiting Senior Fellow in climate law and litigation at the Grantham Research Institute at the London School of Economics.



Padam Bahadur Shrestha

President, Environment Law Society Nepal

Padam Bahadur Shrestha is an environmental lawyer. He focuses mostly on legal writing, research, litigation, and environmental lawsuits in his line of work.

He received his LLM from Tribhuvan University, where he specialized in environmental law. He also holds a master's in political science. He established Jana Jyoti Law Firm in 2004 and also serves as president of the Environment Law Society Nepal.

He has also served as coordinator of the Environment Law Committee of the Nepal Bar Association (from 2016 to 2019) and in many other roles on various environmental committees. He was also the team leader of the preparatory committee on the *Environmental Report on the Situation Status of the Nepalese Court 2009*. In 2019, the Ministry of Forest and Environment of Nepal awarded him the "Environmental Conservation Award."

His notable writings include *Nepalese History of Environmental Law and Environment Justice and the Role of the Court*.



Rupert Stuart-Smith

Research Associate in Climate Science and the Law,
Sustainable Law Programme,
University of Oxford

Rupert Stuart-Smith is a Research Associate at the University of Oxford, where he leads the Sustainable Law Programme's research, teaching, and engagement on climate science and the law. His present research covers the use and interpretation of climate science evidence in litigation and methodological developments in climate change attribution science. His current work also spans climate and glacier modeling, the impacts of climate change on health, and strategy development for climate litigation.

Dr. Stuart-Smith regularly provides scientific advice for climate lawsuits, and has authored expert reports for pending litigation in national and international courts. He has also worked as a consultant for the Foundation for International Law for the Environment (FILE), supporting the development of FILE's legal granting strategy, and for WWF-UK, Climate Analytics, and Vivid Economics.



Shibani Ghosh

Lawyer

Shibani Ghosh is a public interest environmental lawyer. She was a Fellow with the Initiative on Climate, Energy and Environment (ICEE) at the Centre for Policy Research (CPR), and an Advocate-on-Record, Supreme Court of India. She researched and wrote on issues relating to environmental law, regulation, and governance. She also appears in environmental cases before the Supreme Court and the National Green Tribunal. She has authored several articles, chapters, and opinion pieces on environmental issues such as environment impact assessment, air pollution and climate litigation. She has edited a volume titled 'Indian Environmental Law: Key Concepts and Principles' (Orient Black Swan, 2019) which provides in-depth case-law based analysis of Indian environmental jurisprudence.

About the Speakers

Ms. Ghosh has been a Sustainability Science Fellow at the Harvard Kennedy School (2014-2015), and a visiting faculty at the TERI University and the RICS School of Built Environment, where she taught environmental law. She was previously associated with the Legal Initiative for Forest and Environment (LIFE), an environmental law firm, and has also worked as a legal consultant with the Central Information Commission, a quasi-judicial body set up under the Right to Information Act, 2005.

She is a Rhodes Scholar and holds a Master of Science (M.Sc.) in Environmental Change and Management and a Bachelor in Civil Law (BCL, a graduate degree in law) from the University of Oxford. She has an undergraduate degree in law from the National University of Juridical Sciences, Kolkata.



Justice Maria Filomena D. Singh

Supreme Court of the Philippines

Justice Maria Filomena D. Singh earned her Juris Doctor degree from the Ateneo de Manila University School of Law with Second Honors distinction. She pursued further studies at the Washington College of Law of the American University in Washington, D.C., USA for a Master of Laws in International Legal Studies. She earlier obtained a Bachelor of Arts Degree in English majoring in Imaginative Writing, cum laude, from the University of the Philippines.

She practiced law for 10 years before joining the Judiciary in October 2002 as the Presiding Judge of Branch 31 of the Metropolitan Trial Court (MeTC) of Quezon City. She was appointed Executive Judge of the MeTC Quezon City thereafter and served for two terms in that capacity. Simultaneously, Justice Singh was selected and sat as the Representative of all First Level Courts in the country on the Board of Trustees of the Philippine Judicial Academy. She served on the PhilJA BOT until her promotion to the Regional Trial Court of Quezon City as Presiding Judge of Branch 85 in June of 2007. Justice Singh was bestowed the Don Antonio Madrigal Award as Most Outstanding First Level Court Judge of 2007 by the Society for Judicial Excellence of the Supreme Court.

From August 2009 to June 2010, Justice Singh was a Hubert H. Humphrey Fellow on Court Management and Judicial Education of the US Department of State in the USA and in the course of such Fellowship, she worked with the World Bank's Institutional Reform Sector, specifically on judicial reform projects in Europe and Central Asia. During the same year, Justice Singh also became the first Philippine Judicial Fellow at the Federal Judicial Center in Washington, D.C., the educational arm of the US Supreme Court and the counterpart of the PhilJA.

On March 14, 2014, Justice Singh was appointed as an Associate Justice of the Court of Appeals. She served as the Chairperson of the Court's Committee on Continuing Judicial Education, and as a Member of the Court's Committee on Rules, Committee on Gender and Development, and an Editor of the Court of Appeals Journal.

While serving as a Judge and, thereafter, as an Associate Justice of the Court of Appeals, Justice Singh served on several committees of the Supreme Court, including the Technical Working Group that drafted the Rule on Small Claims and its templates; the Technical Working Group on the Updating of the Philippine Benchbook of Forms for Trial Court Judges; the Technical Working Group on the Revision of the Rules Governing Notaries Public.

In 2017, Justice Singh had the privilege of drafting Chapter 6 on the Swift and Fair Administration of Justice of the Philippine Development Plan, the economic blueprint of the country for 2017-2040. In this Chapter, Justice Singh pushed for a sector approach for the delivery of justice, a monumental shift from the traditional individual agency approach.

Justice Singh was the Chairperson of the Civil Law Department of the Philippine Judicial Academy, and sat in its Sub-Committee for Curriculum Review. She was likewise a member of the faculty of a number of law schools in the country, including the Ateneo de Manila University, the University of the Philippines College of Law, the University of Santo Tomas Faculty of Civil Law, the Lyceum of the Philippines University College of Law, the Centro Escolar University School of Law and Jurisprudence, the De La Salle University College of Law, and the Manuel L. Quezon University College of Law.

In 2021, Justice Singh was appointed as the Expert Resource Person of the Legal Education Board Curriculum Revision Committee, in the crafting of the Revised Model Curriculum for legal education.

Justice Singh is a published author. In 2021, she co-authored a best-selling pre-week reviewer on Remedial Law for bar examinees. She presented a paper on Court and Case Management upon the invitation of the International Organization for Judicial Training, the global network of judicial training institutions. She has also written a Toolkit for Philippine Trial Judges, as well as a working paper on Enforcement of Ethical Standards. She has published a number of articles in the Court of Appeals Journal and the Ateneo Law Journal, including the articles entitled "Rule 42: Writing Finis to a 20-Year Redundancy" and "The Hearsay Rule: A Paradigm Shift."

Justice Singh was also an active lecturer on the Mandatory Continuing Legal Education (MCLE) circuit for lawyers prior to her appointment to the Supreme Court. Justice Singh was selected as the 17th Metrobank Professorial Chair Lecturer for 2021, a distinguished lecture series for outstanding members of the judiciary. She was the first female to be bestowed this distinction.

On 18 May 2022, Justice Singh took her oath before Chief Justice Alexander G. Gesmundo as the 194th Associate Justice of the Supreme Court.

About the Speakers

Currently, Justice Singh is the Co-Chairperson of the Committee on Gender Responsiveness in the Judiciary, and the Planning Committee of Chapter 13.2 of the Philippine Development Plan 2023-2028, on the Enhanced Administration of Justice. She is also the Chairperson of the following Sub-Committees and Technical Working Groups: the Justice Sector Coordinating Council Technical Working Group on Processes and Capacity Building, the Sub-Committee the Review of the New Code of Judicial Conduct for the Philippine Judiciary; the Technical Working Group to Compile, Classify, and Index All Pertinent Rules, Guidelines and Issuances on Pleading, Practice and Procedure; the Technical Working Group on Disposal of Unserviceable Properties; the Technical Working Group to Study Proposals Regarding the Adoption of Filtering Mechanisms to be Required Prior to Resort to Court Action; the Technical Working Group to Study and Revise the Book of Forms; and the Technical Working Group on Feminism in Philippine Jurisprudence.

Justice Singh is the Vice Chairperson of the Committee for the Council of ASEAN Chief Justices Working Group on the Conduct of Videoconferencing; the Supreme Court Governing Council for Mental Health; the Sub-Committee for the Revision of the Code of Professional Responsibility; the Oversight Committee for the Implementation of Rule 138-A or the Revised Law Student Practice Rule; and the Technical Working Group That Will Study The Reports Entitled “Preparing and Implementing the Digital Information System Access Plan” and “Organizational Assessment and Quasi-Diagnostic Process Mapping” and Propose Recommendations on Their Key Results.

Justice Singh is also a Member of the Technical Working Group on Electronic Notarization; the Committee on the Revision of the Rule of Summary Procedure and Small Claims Cases; the Sub-Committee on the Revision of the Rules of Criminal Procedure; and the Philippine Statistical Development Program Steering Committee.

Justice Singh is the representative of the Philippine Judiciary in the Panel of Referees of the Journal of the Malaysian Judiciary.

Born on June 25, 1966, Justice Singh, a single parent, has four children – Maria Clara Francesca, Jude Anthony, Joseph Gerard, and Joshua John. She is the daughter of Harry Francisco M. Singh and Atty. Clara Dizon Dumandan-Singh.



Bharati Kumari Pathak

Bharati Kumari Pathak is the Chairperson of the Federation of Community Forestry Users Nepal (FECOFUN), a passionate and long-time Community Forestry User Group member, a seasoned leader, and a powerful activist in the field of community forestry rights, advocacy, women empowerment, human rights, and social justice movements in Nepal. She has more than 25 years of experience in building partnerships, collaboration, prudent alliances, and cooperation to grip outcomes in expanding relationships with key partners and stakeholders to strengthen community forest users' voices.

Her prime responsibility at FECOFUN lies in securing the resource rights of community forestry users groups and to provide guidance and mentorship to district and local FECOCUN committees in strengthening proactive engagement in forest management with securing the community forestry rights of users. She also proactively engages in facilitating and providing capacity-building trainings to forest professionals, women, indigenous people, and local communities. Moreover, Ms. Pathak provides overall guidance and support strategic management of FECOFUN as per the approved policies and strategies by the board of governance.

In addition, Ms. Pathak actively participates in environment and climate change related programs at the national and international levels. She regularly conducts dialogues and meetings with public representatives regarding forestry, environment, law enforcement, good governance, gender equality, and social inclusion. She works closely with local, national, and international foresters and land policymakers to design and implement policy and institutional frameworks to support sustainable biodiversity conservation within the community forest of Nepal. Also, Ms. Pathak facilitates the development of scientific and technical advice to formulate science-based policy positions in national and international forest policy forums. She works with government, NGOs, INGOs and non-external partners to support international efforts to strengthen forest science, biodiversity conservation, sustainable forest management, watershed conservation and community forest land restoration worldwide.

Ms. Pathak has led several projects to date. She has worked with the Rights and Resources Initiative (RRI), Forest and Farm Facility (FFF), The Tenure Facility (TF), Pani Project, and USAID Hariyo Ban Program to secure the community rights to forest and deliver diverse programs on agrobiodiversity, disaster risk reduction, forest fire, climate change, Gender Equality and Social Inclusion (GESI) and Indigenous Peoples (IP) governance, and pro-poor development in Nepal.

About the Speakers

Her early career at FECOFUN began in the role of treasurer in 2064 B.S. (2007). She served in the same position for two terms. She was nominated as the General Secretary of FECOFUN in 2071 B.S. (2014). Eventually, she was nominated as Chairperson of FECOFUN in 2075 B.S. (2018). During her tenure, she plays an important role in eliminating triple taxation imposed on community forestry products. Now, she is strongly advocating to formulate sustainable forest management principles and guidelines that are locally adaptable and community-friendly.

Ms. Pathak is involved in several organizations and women's networks. Additionally, she is also serving as the senior fellow of the Global Evergreening Alliance and the global co-chair of the Dedicated Grant Mechanism (DGM). Regarding other global representations, she is the observer for the Climate Investment Fund (CIF) and Forest Carbon Partnership Facility (FCPF) at the World Bank.

She is currently a PhD scholar at Parul University, India carrying out her research in securing community forestry land rights within the three tiers of government of Nepal. Ms. Pathak has an extensive research background in forestry science and social forestry. She had published dozens of research articles in various national and international journals regarding forest tenure, community stewardship, and forest policy.

Recently she has been elected as a member of parliament in the Bagmati Province under a proportionate system from the CPN UML party. She is looking forward to working in the policy sector to secure the rights of women over natural resources.

Ms. Pathak strongly believes that FECOFUN has a robust role in sensitizing the public to better understanding the role that community forestry is playing in halting deforestation and degradation, combating climate change, and securing socio-economic integrity.



Yam Malla

Forest Governance Consultant

Yam Malla holds a PhD in Forestry from the Australian National University (Australia), an MSc in Agriculture Extension from the University of Reading (UK), and a Post-Graduate Diploma in Forestry from the University of Wales (UK). He has worked as the Country Representative of the International Union for Conservation of Nature (Nepal), as the Executive Director of the Center for People and Forests—a Bangkok-based international organization committed to promoting community forestry, a Lecturer at the University of Reading (UK), and as Extension Specialist and Rural Development Advisor for various forestry/natural resource management projects in Nepal. He now works as a freelance consultant.



Darren Thomas

CEO / Senior Consultant Double Helix

An expert in supply chain due diligence, Darren helps buyers, suppliers and retailers of forest products and agri-commodities comply with emerging due diligence regulations. He manages projects across Asia, Africa, Europe, and the Americas, focusing on the implementation of practical solutions to achieve supply chain transparency and product traceability.



Martin Cosier

Environment and Climate Change Law Specialist (Consultant), ADB

Martin Cosier is the Environment and Climate Change Law Specialist on the Asian Development Bank's Judicial Capacity Building Program. He has 20 years of experience working on environmental law and policy issues across Asia, Australia, and the United States.

Martin specializes in the development and implementation of environmental protection, natural resource management, and disaster risk reduction law and policy. He has consulted widely across Southeast Asia, acted as Chief Technical Advisor for UNDP Myanmar, and worked for Australian Government agencies on international development and natural resources management.

Martin holds degrees in law and environmental science from Australia and a Masters in Environmental Law from the United States.

About the Speakers



Justice Rachel Pepper

Land and Environment Court of New South Wales

Justice Rachel Pepper was appointed as a Judge of the Land and Environment Court of NSW in May 2009.

She is an Adjunct Professor at the University of Sydney's Law School and a Fellow of the Australian Academy of Law. In 2015, she was the Centre for International and Public Law's inaugural Visiting Judicial Fellow at the College of Law at the Australian National University.

Justice Pepper is a member of numerous committees including, the Ngará Yura Committee of the Judicial Commission of New South Wales and the AIJA Indigenous Justice Committee, a Vice President of the Australian Institute of Administrative Law, and the Secretary of the NSW Chapter of the Australian Institute of Administrative Law. She is also a New South Wales representative on the Executive Committee of the Australian Association of Women Judges and a board member of Twenty10.

During 2017 and 2018, her Honor chaired the Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Gas Reservoirs and Associated Activities in the Northern Territory.

From 1997 until her appointment to the bench, she practiced as a barrister at the New South Wales Bar predominantly in commercial and public law. While at the bar, she was a member of the Bar Council from 2000 to 2009, including holding the role of Secretary from 2006 to 2009.

Prior to being called to the bar, Justice Pepper was the Associate to the Hon. Justice Michael McHugh AC in the High Court of Australia.

She has edited and authored numerous books, law journals, book chapters, and articles on environment and planning law, administrative law, constitutional law, criminal law, and discrimination law, and has been published nationally and internationally.



Justice Ananda Mohan Bhattarai

Supreme Court of Nepal

Justice Ananda Mohan Bhattarai currently serves in the Supreme Court of Nepal. Justice Bhattarai holds an M.A. (English & Pol. Sc.) from Tribhuvan University, and LLM & JSD degrees from the National Law School of India University. He is also a recipient of the Hubert Humphrey Fellowship (2002-03) for research studies at the Massachusetts Institute of Technology, United States of America, and the Alexander von Humboldt Fellowship (2005-06) at the Max Planck Institute of Comparative Public Law and International Law, Germany. He has also authored four books and contributed several dozens of articles on legal issues in national and international journals. His book “Protection of Himalayan Biodiversity” (Sage, 2010) received reviews at home and abroad.

Justice Bhattarai has handed down many landmark decisions on the constitution, human rights, gender justice, criminal justice, heritage protection, and environmental justice from the Supreme Court of Nepal. Among them, decisions on the protection of cows (the national animal of Nepal), Chitwan National Park (the oldest and largest park in Nepal), heritage property of Lord Pashupatinath (world-famous Shiva temple), flood and natural disasters, and prohibition on excavation and export of stones, boulders from the Churia and Mahabharat range, and others to India, are much acclaimed for promoting the cause of environmental justice and heritage conservation.



Justice Syed Mansoor Ali Shah

Supreme Court of Pakistan

Justice Syed Mansoor Ali Shah was elevated to the bench at the Lahore High Court in 2009 and after serving as the Chief Justice of the Lahore High Court for almost two years was elevated to the Supreme Court of Pakistan in early 2018. He did his schooling at Aitchison College, Lahore and obtained his law degree from the University of Cambridge, UK, as well as, the University of the Punjab, where he also obtained a degree in Masters in Economics. As a corporate litigator, he was a partner at Afrid, Shah & Minallah¹ and took a keen interest in public

¹ All the three partners were successively elevated to the Bench and the law firm was dissolved.

About the Speakers

interest litigation with special focus on environmental issues and sustainable development. He had a passion for teaching and taught law for almost two decades at various institutions including; Lahore University of Management Sciences (LUMS), Punjab Law College, Pakistan College of Law, Lahore, and at the Civil Services Academy, Lahore. He was also part of the steering committee that established the law school at LUMS, now called Syed Ahmed Hassan School of Law & Policy (SAHSOL).

His areas of special interest are the constitutional law, human rights, climate² and water justice, environmental sustainability, disability rights, criminology, digital surveillance, privacy and proportionality. He believes in continuous judicial reforms; as the Chief Justice of the Lahore High Court, he spearheaded the formation of Alternate Dispute Resolution Centers (ADRC) in Punjab. This was to provide an alternative to litigation in order to reduce the chronic backlog and staggering pendency of cases. He also set up the first-ever Gender Based Violence Court (GBV) and a Child Court at Lahore besides Criminal and Civil Model Courts to create working coordination between stakeholders in order to speed up dispensation of justice. He introduced Case Management and Court Automation Systems in Punjab both at the Lahore High Court and the District Courts, installed the Enterprise IT System with the help of the Punjab Information Technology Board (PITB) to sustain the IT vision of the court for the next decade and to make the judicial system open, transparent, smart, and fully-connected at all levels. To provide access to justice to an ordinary litigant and the lawyers, online Call Centre, Judicial Mobile Application, and online *Sahulat* (care) Center were established.

He underlines the need for Information Technology, Artificial Intelligence, Video Linking, Human Resource Development and Restructuring of the District Judiciary as the effective engines of change for the future and would like them to be mainstreamed to achieve state of the art judicial governance. He lays great emphasis on empowering the District Judiciary by enhancing their capacity through international and domestic training, based on performance indicators and by providing them a secure and conducive working environment, especially for the women judges. He feels that we need to increase judge per capita to improve the quality and speed of dispensation of justice in the country.

He helped restructure the curriculum at the Punjab Judicial Academy and brought it in line with the global best practices building a sustainable platform for judicial capacity building of the members of the District judiciary and the ministerial court staff. He laid special emphasis on research and played a foundational role in setting up the Lahore High Court Research Centre (LHCRC).

At the Supreme Court of Pakistan, he has helped establish e-courts by video linking the Principal Seat of the Supreme Court with all the Provincial Registries of the Supreme Court, which has helped save travel cost to Islamabad from all over the country and has brought relief to the working schedule of the lawyers who can attend to more cases, work more efficiently by avoiding adjournments. This was done prior to Covid-19 and has attained exceptional utility during the pandemic. The new SC Judicial Mobile Application helps lawyers and litigants navigate their way through the cause lists and court rosters and have enhanced their access to

² He has authored *Leghari v. Federation of Pakistan*, PLD 2018 Lahore 364 and *D.G. Khan Cement Company Ltd. v. Government of Punjab*, C.P.1290-LJ/2019 (Decision of the Supreme Court of Pakistan, 15 April 2021).

justice. Research and scholarship are the hallmarks of any apex court in the country, hence Research Centre (SCRC) at the Supreme Court was established, manned by bright and promising Civil Judges from all across Pakistan. SCRC carries the vision to eventually provide and support research to all the courts in the country, thereby enriching our jurisprudence and the scholarship of our judges.

Justice Shah is an accredited mediator from CEDR, London; an Honorary Bencher of Lincoln's Inn, UK; a judicial member of the Global Judicial Institute on Environment (GJIE) (Brazil); a member of the Global Constitutionalism (Yale University, 2020-present) and a Member of the Rhodes Scholarship Committee for Pakistan (2019-present). He is an avid golfer, loves sports and enjoys cycling, reading, traveling and music.



Judge Kedar Paudel

Deputy Executive Director
National Judicial Academy of Nepal

Judge Kedar Paudel, former Judge of High Court, assumed the office of Deputy Executive Director (DED) from 25 February 2019 to 15 July 2020 and rejoined the office from 16 December 2020. Before that he was Joint Secretary dealing with the multilateral affairs of Nepal in his capacity as the Head of International Law and Human Rights division of the Ministry Law, Justice and Parliamentary Affairs. He has served as a Civil Servant in various capacities in different Ministries, Departments and Constitutional bodies namely the Office of the Prime Minister and Council of Ministers, Commission for the Investigation of Authority, Public Service Commission, Judicial Training Centre for about 30 years.

DED Paudel has participated in several Government delegations in the capacity of leader and member of the delegations representing Nepal in various bilateral, regional and multilateral forums. He was the member of delegation of Nepal while presenting Universal Periodic Report (UPR), Initial and Periodic report of CEDAW, CRC, ICCPR and ICESCR and so on. He was the leader of the delegation of Nepal in the 11th United Nations Congress on Crime Prevention in 2010 in Bangkok, Thailand and was a member of the delegation in 10th Congress 2005 in Vienna, Austria. He has been the resource person and panelist in various national and internal trainings, seminars and conferences. He has written number of articles mainly on human rights issues and transnational and economic organized crime.

He holds Masters Degree in Law (LL.M) from Pune University, India (first rank in merit among the successful candidates), Masters in Business Administration and Commerce with merit from Tribhuvan University Nepal. He has done Masters level study in Political Science and in Public Administration from Tribhuvan University Nepal.

About the Speakers

DED Paudel has decorated with Mahendra Bidya Bhusan (for his excellent academic performance in his LL.M Study in foreign University) and Prawal Gorkha Dakshin Bahu from the Head of the State of Nepal the then His Majesty King of Nepal; National Education Medal from the Ministry of Education for his contribution in the development of the education in the country.



Justice Yahya Afridi

Supreme Court of Pakistan

Mr. Justice Yahya Afridi was born in Dera Ismail Khan on 23rd January 1965. He belongs to the Adam Khel section of the Afridi tribe located in the Kohat Frontier Region and is a resident of Village Babari Banda, District Kohat. He belongs to a family steeped in a tradition of public service.

His Lordship received his early education at Aitchison College, Lahore. He went on to earn his Bachelor of Arts in Political Science and Economics from Government College Lahore and later obtained his Masters of Arts degree in Economics from Punjab University, Lahore.

After being awarded a Commonwealth Scholarship, Justice Afridi completed his LL.M. from Jesus College at the University of Cambridge. He was subsequently selected for a scholarship program for Young Commonwealth Lawyers at the Institute of Legal Studies in London.

His Lordship interned at Fox & Gibbons, Solicitors, in London, before returning to Pakistan where he joined Orr, Dignam & Co. in Karachi as an Associate. He went on to start his private practice in Peshawar and lectured at Khyber Law College, University of Peshawar where he taught International Law, Labor Law, and Administrative Law.

His Lordship was enrolled as an advocate of the High Court in 1990 and as an advocate of the Supreme Court in 2004. He served as an Assistant Advocate General for the province of Khyber Pakhtunkhwa and as a Federal Counsel for the Government of Pakistan while in practice.

His Lordship was elevated to the Bench of the Peshawar High Court as Additional Judge in 2010 and was confirmed as a Judge of the Peshawar High Court on 15 March 2012.

Justice Afridi became the first judge from the Federally Administered Tribal Area to assume the office of the Chief Justice of the Peshawar High Court when he took oath on 30th December 2016. He served in that office until his elevation as a Judge of the Supreme Court of Pakistan on 28 June 2018.



Justice Yasantha Kodagoda P.C.

Supreme Court of Sri Lanka

Hon. Justice Yasantha Kodagoda, P.C. is a Judge of the Supreme Court of Sri Lanka and President's Counsel. Over his long career spanning over three decades, His Lordship has held important positions such as the President of the Court of Appeal of Sri Lanka, the second-in-command of the Criminal Division of the Attorney General's Department and Additional Solicitor General.

Hon. Justice Yasantha Kodagoda, P.C. having successfully completed the three Attorneys examinations, was called to the Bar as an Attorney-at-Law of the Supreme Court in 1988, holds a Masters' Degree (LL.M.) in Public International Law from the University College London in the United Kingdom.



Justice M.M. Sundresh

Supreme Court of India

Justice M.M. Sundresh completed his law degree in the year 1985. As a lawyer, he was appointed as a member of the Monitoring Committee to oversee the establishment of Reverse Osmosis (RO) System in three districts of the State of Tamil Nadu. In these districts, there was continuous pollution due to the letting out of untreated water containing chemical components. The land as well as the water bodies became polluted. There was a lack of adequate control measures including waste management. The Monitoring Committee, therefore, undertook an exercise in establishing zero discharge treatment plants.

As a judge, Justice Sundresh has dealt with many matters in the field of the environment. He led the Bench which monitored the removal of exotic and invasive species of Lantana among various other flora and fauna. A pilot project was directed to be established. He also led the Bench which ordered the premier agency to investigate the indiscriminate poaching of male elephants which was not brought to light.

He was elevated to the Supreme Court of India on 31 August 2021.

About the Speakers



Justice Md. Nuruzzaman

Judge
Appellate Division
Supreme Court of Bangladesh
Former Member, Bangladesh Judicial Service Commission.
Former Chairperson, Enrollment Committee of the Bangladesh Bar Council

Justice Md. Nuruzzaman currently serves as Judge of the Appellate Division of the Supreme Court of Bangladesh. He is a former member of the Bangladesh Judicial Service Commission. He was also the Chairperson of the Enrollment Committee of the Bangladesh Bar Council.

Justice Nuruzzaman was elevated as Additional Judge of the High Court Division in 2009 and appointed Judge of the same Division in 2011. He was elevated to the Appellate Division of the Supreme Court of Bangladesh in 2018. He also serves as Acting Chief Justice of Bangladesh on various occasions as the most senior judge of the Appellate Division of the Supreme Court.



Justice Dheebanaz Fahmy

High Court of Maldives

Justice Dheebanaz Fahmy has been serving as a Justice of the High Court of the Republic of Maldives since August 2022. Prior to her elevation to the High Court, she served as the first woman judge of the Criminal Court of the Republic of Maldives. She has held key positions within State institutions in the Maldives including the post of Deputy Prosecutor General and Deputy Director of the Attorney General's Office. She also worked as the Managing Partner of Munavvar & Associates Law Firm.

Justice Dheebanaz Fahmy has served as a member of the Committee of Experts appointed by the Bar Council of Maldives to provide technical support and develop the inaugural Bar Examination in the Maldives. She also served as a member of the Ethics Committee of the Bar Council of Maldives, a statutory subcommittee created under the Legal Profession Act of the Maldives to investigate disciplinary complaints submitted against lawyers.

Justice Dheebanaz Fahmy has taught Company Law for the Faculty of Business Management at Villa College and continues to teach Criminal Law for the University of West of England, LLB Program at Villa College over a number of years. Additionally, she has worked as a consultant for the International Organization for Migration, the United Nations Development Programme, and the United Nations Children's Fund on projects related to improving access to justice and advancing the rule of law in the Maldives.

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members —49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



ASIAN DEVELOPMENT BANK
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
www.adb.org