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by the German Bundestag

# IKI Newsletter Indonesia

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19<sup>TH</sup> EDITION



December 2022

## About the International Climate Initiative

The International Climate Initiative (IKI) is an important part of the German government's international climate finance commitment. Since 2022, the Federal Ministry for Economic Affairs and Climate Action (BMWK) has been the lead ministry for IKI. The funding programme cooperates with its founding ministry, the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), as well as the Federal Foreign Office (AA). Through IKI, the ministries jointly support approaches in developing and emerging countries to implement and ambitiously develop the Nationally Determined Contributions (NDCs) anchored in the Paris Agreement. This includes measures to adapt to the impacts of climate change and to conserve and rebuild natural carbon sinks, taking into account environmental, economic, and social concerns. With regard to biodiversity, IKI also supports its partner countries in achieving the goals of the Convention on Biological Diversity (CBD).

The activities from IKI projects range, for example, from advising policy-makers on capacity building and technology partnerships to risk hedging through innovative financial instruments. They also include studies, project preparation advice for infrastructure development, and investment instruments for climate change mitigation or biodiversity conservation.

To date, IKI has approved more than 800 climate and biodiversity projects in over 60 countries worldwide with a total funding volume of five billion euros (2008–2021).

The programme management, evaluations, and technical assistance of the projects, as well as the management of IKI media and communication, are supported by the IKI Office at the government-owned Zukunft – Umwelt – Gesellschaft (ZUG) gGmbH.

The IKI finances projects run by organisations that implement measures together with developing, emerging, and transitional countries within the four IKI funding areas: mitigating greenhouse gas emissions; adapting to the impacts of climate change; conserving natural carbon sinks with a focus on reducing emissions from deforestation and forest degradation (REDD+); and conserving biological diversity. Many projects normally involve more than one funding area.

More information is available on the [IKI website](#).

## **IKI Small Grants 4<sup>th</sup> Call for Proposals open until 15 March 2023**

**The fourth call for proposals by IKI Small Grants is open until 15 March 2023**



*Small organisations in ODA-eligible countries can apply for funding for climate and biodiversity projects. The IKI Small Grants call for proposals is open until 15 March 2023.*

This international call for proposals addresses small regional, national, and local organisations based in an ODA-eligible country (except for current and potential EU member candidates excluding Ukraine). They are invited to apply directly for

funding for local or regional climate and biodiversity projects. IKI Small Grants provides funding between EUR 60,000 and 200,000 and is part of the International Climate Initiative (IKI) of the German Federal Government.

Ambitious project proposals should focus on one or more of the following IKI funding areas:

- mitigation of greenhouse gas emissions
- adaptation to the impacts of climate change
- conserving natural carbon sinks with a focus on reducing emissions from deforestation and forest degradation
- conserving biological diversity

### **Local initiatives with tailor-made solutions**

Many projects support climate-vulnerable groups and empower women and youth. For example, green jobs for young people are being created in Burkina Faso through the dissemination of the Nubian Vault construction method. This low-tech architecture in house construction offers great potential for reducing emissions. In Kanyakumari, India, mangrove forests are being reforested which in turn supports women fishermen from the indigenous communities. In Mexico, local forest owners have been rehabilitating tropical cloud forests with the support of a newly developed digital monitoring system.

The selected organisations are accompanied and supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, which implements the IKI Small Grants Programme on behalf of Germany's Federal Ministry for Economic Affairs and Climate Action and the Federal Foreign Office.

### **Small-scale projects on climate and biodiversity action worldwide**

Under the IKI Small Grants programme, many projects are to be selected in the coming years via international calls for proposals and funded with up to EUR 200,000 each. Three calls for proposals have already been implemented, and more than 90 projects in over 40 countries have been selected so far.

In this year's call, IKI Small Grants further explicitly encourages applications that refer to the current UN Decade on Ecosystem Restoration, promote gender equality and/or engage youth.

Further information including funding and application guidelines can be found at <https://iki-small-grants.de/application/>

## Policy Highlights

### *The 15<sup>th</sup> Meeting of the Conference of the Parties on Biodiversity (COP15)*

After two weeks of negotiations between 7 and 19 December 2022 in Montreal, countries at COP15 have reached a final deal with a new target of protecting 30% of land and 30% of coastal and marine areas by 2030. In Indonesia, more than 54% of the forest area is a protected area and about 8.7% of important marine areas are legally protected. The Government of Indonesia is committed to supporting this new set of goals and targets by planning to increase the area of marine protected areas to 32.5 million ha by 2030 (10% of Aichi Target) and will gradually increase to 30% by 2045. The official Convention on Biological Diversity (CBD) press release is available [here](#).

### *The 27<sup>th</sup> Session of the Conference of the Parties (COP27)*

The COP27 in Sharm-El-Sheikh, Egypt, resulted in countries delivering a package of decisions that reaffirmed their commitment to limit global temperature rise to 1.5 degrees Celsius above pre-industrial levels (strengthened action to cut GHG emissions and adapt to the inevitable impacts of climate change, boosting the support of finance, technology, and capacity building needed by developing countries).

Indonesia's Vice President (VP) K.H. Ma'ruf Amin represented President Joko Widodo when attending the opening ceremony of COP27 as the leader of the Delegation of the Republic of Indonesia. He delivered a national statement at the COP27 High-Level Summit and emphasised three important points that countries in the world need to do together in tackling climate change:

- The COP27 must be used not only to enhance ambition but also implementation including the fulfilment of support for developed to developing countries.
- Every country should be part of the solution with the spirit of burden-sharing instead of burden-shifting. More capable countries should support and empower other countries.
- Indonesia continues its efforts to lead by example. Indonesia has taken concrete steps to reduce emissions, including investment in energy transition, funding for climate action, and increasing emission reduction targets.

The VP also mentioned that this effort is coherent with significant progress of policies including expansion of nature conservation and restoration, implementation of the carbon tax, FoLU Net Sink 2030, development of EV, and initiation of the B40 program.

Indonesia will continue to pay attention to strengthening climate action through the ASEAN Chairmanship in 2023.

### *Group of Twenty (G20)*

The Just Energy Transition Partnership (JETP) in Indonesia, a USD 20 billion cooperation to accelerate the transition to clean energy, was officially unveiled at the G20 meeting on 15 November 2022. The JETP marks a fundamental shift in energy policy that will speed up the phasing-down of coal power and scale-up renewable energy. As the second country to launch a JETP, Indonesia calls for renewables to comprise 34% of the total electricity generation by 2030, whereas the government has previously aimed for 23% by 2025. The Indonesia JETP also aims at an accelerated decommissioning of coal-fired power plants, with emissions to peak by 2030 at no more than 290 million metric tonnes of CO<sub>2</sub> equivalent.

Bappenas released three G20 Development Working Group Outcome Documents at the G20 Leaders' Summit Side Event. The documents comprise the G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including Least Developed Countries and Small Island Developing States; the G20 Principles to Scale up Blended Finance in Developing Countries, including Least Developed Countries and Small Island Developing States; and the G20 Chair's Summary on Multilateralism for Sustainable Development Goals.

### *Climate Policy*

Indonesia submitted the Enhanced Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat on 23 September 2022 with an increased emission reduction target from 29% to 31.89% unconditionally and from 41% to 43.2% conditionally. For the implementation of the NDC towards low carbon and climate resilience, the Ministry of Environment and Forestry of Indonesia (MoEF) promulgated the Minister Regulation No. 21/2022 concerning Carbon Pricing Governance on 20 October 2022 which regulates schemes and procedures for implementing carbon trading in Indonesia. In the NDC, the GHG emission reduction scenario from the Forest and Other Land Uses (FOLU) sector is projected to contribute nearly 60% to the total GHG emission reduction target. The Enhanced NDC is available [here](#).

The Adaptation Communication (ADCOM) for Indonesia is submitted to the UNFCCC by the MoEF as the national focal point for climate change in Indonesia. Indonesia's ADCOM is the first adaptation communication document to be prepared and submitted with adaptation priorities, strategies, policies, plans, and goals referring to the enhanced NDC and its roadmap. The ADCOM identified gaps, priorities, needs, and financial mechanisms to implement climate change adaptation in the country. The document is available [here](#).

### *Sustainable Transport*

The price of subsidised petrol fuel ("Pertalite") and subsidised diesel fuel ("Solar") has increased from IDR 7,650 to IDR 10,000 per litre and from IDR 5,150 to IDR 6,800 per litre, respectively. The price of non-subsidised petrol fuel type ("Pertamax") has also increased from IDR 12,500 to IDR 14,500 per litre. The policy came in effect in September 2022. The fuel price increase was implemented to manage the fiscal pressure from subsidy expenditure inflation due to rising global fuel prices.

The Indonesian Coordinating Ministry of Maritime and Investment Affairs, Luhut Binsar Pandjaitan, announced an upcoming incentive to boost electric vehicle uptake, in particular electric motorcycles and cars. Next year, a purchase price subsidy of IDR 6.5 million per unit will be available for e-motorcycle. Meanwhile, the incentive for electric cars is still being developed.

### *Forestry, REDD+*

The MoEF launched the Peat Ecosystem Management Protection Information System (SiPPEG), which provides information including the Peat Ecosystem Quality Index and detailed Groundwater Level data. The system will support efforts to strengthen peat protection and management to achieve commitments for reducing carbon emissions to prevent climate change.

Bappenas has released the evaluation results of the National Long-Term Development (RPJPN) 2005-2025. In the Natural Resources and the Environment section, Indonesia succeeded in reducing deforestation by 75.03% to 115.46 thousand ha, this number was lower than the 2018-2019 deforestation of 462.46 thousand ha.

The MoEF has developed Indonesia's FoLU Net Sink (IFNET) Measurement, Reporting, and Verification Standards for 2030. To achieve the FoLU Net Sink target and accelerate transformational change towards low-carbon development and climate resilience, the MoEF has developed five work programmes, namely sustainable forest management, increasing forest carbon stocks, conservation of natural forests, management of peatlands, and building instruments and information. This was also presented at the Indonesian Pavilion at COP27 on "The Role of Standards to Accelerate Indonesia's FoLU Net Sink 2030".

### *Biodiversity*

The MoEF recently issued the Circular Letter of the Director General of Sustainable Forest Management No. SE.7/PHL/PUPH/HPL.1/10/2022 to the forest concession license holders all over Indonesia, Forest Utilisation Business Licensing (*Perizinan Berusaha Pemanfaatan Hutan* or PBPH),

as a follow-up of the Minister Instruction No.1/MENLHK/SEDEN/KUM. 1/6/2022. The letter urges the concession license holders to identify and delineate the high conservation value of the forest for establishing protected areas within the PBPH, in addition to intensifying protection of wildlife from traps and hunting and also human-wildlife conflicts from inside and outside state forest areas.

#### *Changes in personnel*

In October, Anies Baswedan ended his term as Jakarta's governor. He was succeeded by Heru Budi Hartono as an interim governor. He is in charge until the official regional leader election period, which will be conducted simultaneously in all subnational regions in 2024.

## **IKI Project Highlights**

### **Yayasan Konservasi Indonesia, Mitigation and Adaptation through Conservation and Sustainable Livelihood on Indonesia's Peat and Mangrove Ecosystems (IKI-PME programme)**

The IKI-PME Programme supported the workshop to finalise the document on National Roadmap of Wetlands Management (Peatland and Mangrove Ecosystems) on 19 September 2022.

A series of Focus Group Discussions for the development of the Peat Ecosystem Protection and Management Plan in North Sumatera took place on 11, 17, 21, and 27 October 2022, followed by a public consultation on 29 November 2022.

### **World Agroforestry (ICRAF) Indonesia, Peat-IMPACTS Indonesia**

The Project has initiated the Peat Ecological Function (*Fungsi Ekologi Gambut* or FEG), which was developed by the Ministry of Environment and Forestry and must be considered in the Spatial Planning process in the OKI district. This process was conducted throughout many discussion sessions with several stakeholders.

The Project is currently initiating the process of introducing peat ecosystems and managing sustainable peat ecosystems at the elementary education level in the Banyuasin District, South Sumatera Province, and the Kubu Raya District, West Kalimantan Province.

The Project has already collaborated with various stakeholders at the district level in developing a cooperation scheme that will be carried out through the development of business models in selected villages in three districts, namely OKI, Banyuasin and Kubu Raya.

### **ITDP, Reducing Emissions through Integration and Optimization of Public Transport in Indonesia**

Street and Trans Semarang inclusivity audits were conducted with representatives of people with disabilities and academia in Semarang prior to the submission of recommendations.

Semarang city endorsed the "Semarang Inclusive Mobility" recommendations in September 2022.

In collaboration with the Ministry of Public Work, a ministerial regulation on Street Technical Guidelines finally adopted inclusive indicators.

### **UNDP, Biodiversity Finance Initiative (BIOFIN II)**

BIOFIN and the Directorate of Environment Bappenas carried out a series of elaborations for the revision of Bappenas's Ministerial Decree 8/2020 concerning project-based Sukuk. The project supported Bappenas in developing green criteria including assessment mechanisms, and a monitoring/evaluation system for infrastructure projects financed by Sukuk. During the process, a common definition of "green" as well as aspects and criteria for green project-based Sukuk (*Surat Berharga Syariah Negara* - SBSN) were identified. Furthermore, a draft policy paper has been produced and reviewed to serve as a guide for key ministries/institutions for any green projects that consider Low Carbon Development and Environmental Sustainability Aspects.

BIOFIN's continued its support to Bappenas and Bappeda Central Java in the area of ecological fiscal transfer and organized three cluster workshops with key district government agencies (OPD) in the Purwokerto cluster, Pekalongan cluster, and Sragen cluster. The purpose of the workshop was to explain the initial concept of the Ecological Fiscal Transfer (EFT) formula and to obtain necessary data from the district/city OPD. The information collected during the meetings includes data on fiscal capacity, potential environmental risks, and projections on environmental initiatives at the district level in three clusters. With the data, the draft EFT formula was prepared and a 2<sup>nd</sup> cluster workshop was organised online to present the results to OPD in all districts in the Central Java Province. The final results of the EFT formula. Monitoring and evaluation mechanisms are being prepared along with academic papers before presenting results at high-level meetings between the Central Java provincial government and Bappenas.

### **GIZ, The Collaborative Actions for Single Use Plastic Prevention in Southeast Asia (CAP SEA) Project**

CAP SEA contributed to the Road to G20: Beating Plastic Pollution, from 3 – 4 November, which was organised by the CMMAI and the National Plastic Action Partnership (NPAP), in collaboration with other projects in the Thematic Focal Area of Solid Waste Management (3RPromar, GID, DKTI) aiming at a commitment for support from the Indonesian-German Development Cooperation in combatting plastic pollution. On 3 November, the Indonesian-German Development Cooperation submitted its pledge of commitment to fight against plastic pollution. On 4 November, CAP SEA and 3RProMar co-hosted a session on Enabling Change for Good: Reducing Plastic Waste through Behavioural Change and Nudges that Work.



# INTERNATIONAL CLIMATE INITIATIVE (IKI) IN INDONESIA

54 Projects under Implementation

26 Implementing  
Organisations



22 Political Partners

Coordinating Ministry of Economic Affairs  
Ministry of National Development  
Planning (Bappenas)  
Ministry of Environment and Forestry  
(KLHK)  
Ministry of Energy and Mineral Resources  
(ESDM)  
Ministry of Transportation  
Ministry of Finance  
Ministry of Industry  
Ministry of Marine Affairs and Fisheries  
Ministry of Agriculture  
Executive Office of the President of the  
Republic of Indonesia  
National Authority for Marine  
Conservation Areas (MMAF)

Peatland and Mangrove Restoration  
Agency (BRGM)  
Association of Southeast Asian Nations  
(ASEAN)  
National Park Authority of Bukit Barisan  
Selatan (BBS)  
Provincial Government of Lampung  
Provincial Forestry Service of Jambi  
Provincial Marine and Fishery Service of  
Aceh  
Provincial Marine and Fishery Service of  
North Sulawesi  
Provincial Marine and Fishery Service of  
West Nusa Tenggara  
District Government of Pesisir Barat  
District Government of Lampung Barat  
District Government of Kapuas Hulu

Adelphi  
Agence Française de Développement  
(AFD)  
Berlin Governance Platform (BGP)  
gGmbH  
Center for International Forestry Research  
(CIFOR)  
Conservation International (CI)  
Deutsche Gesellschaft für Internationale  
Zusammenarbeit (GIZ) GmbH  
Deutsches Institut für  
Wirtschaftsforschung e.V. (DIW)  
ICLEI - Local Governments for  
Sustainability  
International Council on Clean  
Transportation (ICCT)  
Institut du Développement Durable et des  
Relations Internationales (IDDRI)  
Institute for Transportation & Development  
Policy (ITDP)  
International Institute for Applied Systems  
Analysis (IIASA)  
Kreditbank für Wiederaufbau (KfW)  
The Organisation for Economic Co-  
operation and Development (OECD)  
Perkumpulan Desa Lestari  
Perspectives Climate Group GmbH  
Rare  
Renewables Academy AG (RENAC)  
Secretary of Convention on Migratory  
Species Office (CMS)  
su-re.co (Sustainability & Resilience)  
United Nations Development Programme  
(UNDP)  
United Nations Environment Programme  
(UN Environment)  
United Nations Office for Project Services  
(UNOPS)  
World Agroforestry Centre (ICRAF)  
World Bank Group  
World Wide Fund for Nature (WWF)

# CLIMATE SITUATION IN INDONESIA

## ADAPTATION

### Climate Change Impacts



## MITIGATION

### Greenhouse Gas (GHG) Emissions



## FORESTRY / REDD+

**3<sup>rd</sup>** country in the world with the largest extent of rainforest

**Nearly 11%** of Indonesia's total land area is covered by peatlands

**40%** of Indonesia's total carbon emissions are the result of peatland conversion

**\$16 billion** estimated economic loss due to peat fires in 2015 according to the World Bank

Deforestation and land-use change have driven around **80%** of Indonesia's greenhouse gas emissions

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## BIODIVERSITY

**1<sup>st</sup>** on the World's 17 Megadiverse Countries list

**2<sup>nd</sup>** on the World's 25 Biodiversity Hotspots list

**18** on the WWF 'Global 200' Ecoregions list

**24** on BirdLife International's Endemic Bird Areas list

**566** national parks covering 36,069,368.04 hectares: 490 terrestrial protected areas and 76 marine protected areas

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# IKI Gender Updates

Measures to integrate and mainstream gender aspects at the project and programme level were initiated by the IKI in 2017. Since November 2021, the [IKI Gender Strategy](#) has provided a high-level framework for supporting and fostering gender justice. This strategy aims to promote gender-transformative approaches within international climate and biodiversity cooperation while embedding gender-responsive processes as a minimum standard at the project level.

This requires IKI projects to ensure that gender-based disadvantages and discrimination to be avoided. A targeted approach to accommodate context-specific gender relations will be used to improve activities in relation to climate action and biodiversity conservation.





## Gender Updates

### Resolving Climate Impacts and Gender Inequality Together with Biogas Digesters

By su-re.co, Biogas Initiative for Agriculture in Bali and Flores funded by carbon offset



*Maria Goretti*

When it comes to installing biogas digesters, there is one group that stands out in the Eastern Nusa Tenggara islands. Not only is the cooperative praised for its high-quality coffee, grown on a bamboo-agroforestry plantation, but also for the sheer fact that its members are young women. Maria Goretti Kedhi, commonly known as Mama Reti, is one of the leaders of the Fa Masa coffee cooperative in Bajawa, that encourages young women to be farmers.

Women in rural Indonesia play a significant role in providing meals and education for their children and collecting cooking fuel—sometimes covering long distances. Spending a long time in the kitchen, where they are exposed to indoor house pollution caused by the use of firewood for cooking, women are most at risk of suffering from the negative

health impacts. By replacing firewood with the biogas digester, the indoor house pollution threatening women's health are reduced significantly. The use of biogas digesters will also reduce the time women spend collecting firewood and allow them extra time for other productive activities and even out the household distribution.



*Climate Field School in Bajawa*

"I want all young women not to be embarrassed about farming, because without farmers we are all hungry," said Mama Reti in an interview. Mama Reti is one of the few female farmers in the project that took part in the Climate Field Schools and also became the owner of a Biogas Digester. For her, the biogas digester is also safer than kerosene, which is more common across the Flores Islands. "The world is always changing, and we must keep on learning," Mama Reti responds after learning more about climate change in the environmental awareness programme.

Climate issues are seldom linked up with gender equality or gender-based vulnerability. Biogas digesters do not only bring together issues such as agriculture and energy, but also gender, hitting multiple birds with one stone. There are many more heroines such as Mama Reti throughout the country and it is about time they receive the appreciation they deserve.

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## Gender Updates

### Eco-print and Financial Management Training in PAM Islands Raja Ampat

**By Yayasan Konservasi Indonesia, Mitigation and Adaptation through Conservation and Sustainable Livelihood on Indonesia's Peat and Mangrove Ecosystems (IKI-PME programme)**



*Eco-printing products in PAM Islands, Raja Ampat*

The IKI-PME programme supports livelihood trainings such as Eco-print assistant and financial management in the PAM Islands Raja Ampat, West Papua. The trainings were conducted at three locations, namely at Saukabu Village on 23 and 24 November, PAM Village on 25 and 26 November, and Saupapir Village on 28 and 29 November. Women's groups from each village participated in the workshops. The training aimed to refining the eco-printing skills of women's groups on the PAM Islands and improving understanding of and skills in the area of financial management so that the local community can generate an additional income from eco-printing.



*Eco-print training on the PAM Islands, Raja Ampat*

The first eco-print sales have made the participants happy and they used the income as working capital to keep up their eco-print business. The

participants have proposed new colour combinations of yellow and orange by using the local plants. With financial management training, the participants learned how to document their income from eco-printing and how to manage it as business capital.

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### Inclusive Wayfinding Prototype for Transjakarta's Bus Stations and Bus Stops

**By ITDP, (Reducing Emissions through Integration and Optimization of Public Transport in Indonesia)**



In response to the need for more inclusive standardisation for all upcoming Transjakarta's stations, and in collaboration with researchers from Universitas Indonesia and FDTJ-Transport for Jakarta, ITDP has conducted an assessment to create inclusive Transjakarta station standards by piloting a prototype at Lebak Bulus Station. Technical experts from GAUN (National Association for Inclusive Accessibility) and PERTUNI (National Association for People with Visual Impairment) as representatives of People with Disabilities (PWDs), were assigned to develop features to be installed later at the stations.

Starting in June, preliminary surveys were conducted to point out relevant issues. A follow-up survey helped to identify the passenger's needs and revealed that this station was accessed by a large number of vulnerable groups, especially by people with visual impairments. The findings from the



## Gender Updates

survey then became the basis for the design of the required interventions and mitigation measures to be implemented in the prototype project at Lebak Bulus station.



This prototype was then tested by the passengers from November to December. The results of the prototype project and the input from the public have been summarised in a recommendation document submitted to Transjakarta on 3 December 2022.

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# Updates from ongoing IKI projects in Indonesia



Cyclists use the new bike lane on Pattimura Street.





# Climate Policy

## Exchange on the Challenges of Forestry and Peatland Management at the IKI Thematic Workshop

**By GIZ, Climate and Biodiversity Hub Indonesia (ClimB Component)**

The IKI Thematic Workshop on Forestry and Peatland was jointly organised by the IKI Interface project 'Climate and Biodiversity Hub Indonesia' of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Yayasan Konservasi Indonesia. This workshop took place at GIZ Country Office Indonesia, in Jakarta, on 2 September 2022. The workshop provided a platform to facilitate exchange between members of the BMUV delegation and IKI implementers in Indonesia on the challenges of forest and peatland management and how IKI projects can address these challenges.

This workshop was attended by Dr. Bettina Hoffmann (Parliamentary State Secretary of BMUV), Dr. Eva Kracht (Director General for International Policy of BMUV), Ms. Warthane Puvanarajah (First Secretary for Climate and Environment, Embassy of the Federal Republic of Germany in Indonesia), BMUV delegates and seven IKI implementing organisations, including Konservasi Indonesia, Wetlands International, CIFOR, ICRAF, UNEP, FAO, and GIZ. In addition, other BMUV representatives and the Principal Scientist of CIFOR from Germany joined the workshop virtually. In total, 33 participants attended the workshop, with 25 offline and 8 online participants.



*Dr. Bettina Hoffmann, Parliamentary State Secretary of BMUV giving her opening remarks*

Dr. Bettina Hoffmann opened the workshop by highlighting the opportunity to listen to IKI implementers. Because the conservation and sustainable management of peatlands are global challenges, learning from each other's experiences and solutions is crucial.



*Participants joining offline at GIZ Country Office Indonesia*

Dr. Iman Santoso from Konservasi Indonesia presented the condition and challenges of managing tropical forests and peatlands in Indonesia. The commitment from the Indonesian government to forest and peatland management, among others, is reflected in the NDC and the Updated NDC, through the establishment of the BRGM (Peatland and Mangrove Restoration Agency), the moratorium on the clearing of primary forests and the conversion of peatlands, the National Medium-Term Development Plan (RPJMN) 2020-2024 and the Net-FOLU Sink operational plan of the Ministry of Environment and Forestry.

Moderated by Ms. Yuliana Wulan from GIZ, the Tour de Table session allowed representatives from seven implementing organisations to share their insights. Each organisation shared general project information and further elaborated on project activities and achievements while also mentioning the challenges in project implementation.

Participants discussed several possible solutions, including strengthening regulatory, policy and planning frameworks, as well as the framework for monitoring, evaluation, and reporting; strengthening the capacities for law enforcement; improving sustainable funding schemes; increasing the capacities of related





# Climate Policy

institutions and further encouraging synergies between stakeholders in peatland management.

Dr. Bettina Hoffmann expressed her appreciation to all participants for attending the workshop and for sharing their project information, achievements, and activities, as well as challenges. She highlighted that implementing organisations are important partners of the IKI and BMUV in Indonesia. In her final remarks, Ms. Warthane Puvanarajah, First Secretary for Climate and Environment, Embassy of the Federal Republic of Germany in Indonesia, expressed her appreciation to GIZ and Konservasi Indonesia for organising the workshop.

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## The Energy Transition as a Catalyst for Green Economy and Low Carbon Development

**By GIZ, Climate and Biodiversity Hub Indonesia (ClimB Component) and Strategic Environmental Dialogues (SUD)**

The confrontation with disruptive challenges like the Covid-19 pandemic or climate change hinders the economic growth and the path towards sustainable development. Indonesia has recognised the potential of a Green Economy as a systemic and integrated approach to overcome these disruptions. The Green Economy drives economic growth, while simultaneously protecting livelihoods, the environment, and a long-term welfare.

To support Indonesia on its path towards a sustainable recovery from Covid-19, a Green Recovery Roadmap was elaborated in cooperation with the Ministry of National Development Planning/Bappenas in 2021. A key insight from the roadmap was that a Green Economy should be one that is based on renewable energy. This renders the energy transition a decisive enabler of Indonesia's transformation towards a Green Economy.

Following up on this finding, an interactive five-day training was developed in cooperation with

the Renewables Academy (RENAC), from Germany. The goal of the training was to explore the role of the energy transition in accelerating the transformation towards a Green Economy and Low Carbon Development. Recognising the need for systemic solutions, the training was specifically targeted to a broad audience from different Ministries and public institutions.

Between 12 and 16 September 2022, twelve participants from the Ministries of National Development Planning, Finance, Energy, and Mineral Resources, as well as the Parliament convened in Bogor. The programme was kicked-off by an opening speech from the Director of Environmental Affairs from Bappenas, Dr. Medrilzam.



*Director of Environment, Dr. Medrilzam, greets the participants during the opening session*

During the subsequent five days, participants gained more insights on sustainable economic transformation through a Green Economy and Low Carbon Development, global trends in energy transition and renewable energy policies and finance mechanisms, while they also improved their communication and negotiation skills.

The training is accompanied by an online learning programme that delves into technical aspects of the energy transition. A study tour to Berlin in February 2023 will conclude the training programme.

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# Climate Policy

## Implementation Agreement Signing Ceremony of the Initiative Resource Efficiency and Climate Action (IREK) II

### By GIZ, Initiative Resource Efficiency, and Climate Action (IREK) II

GIZ and the Ministry of Environment and Forestry (KLHK) held a ceremony for the signing of the project implementation agreement of the Initiative Resource Efficiency and Climate Action (IREK) II in Jakarta on 3 November 2022. The project aims to strengthen the capacities of key actors from the public and private sectors for increasing resource efficiency in Indonesia that can contribute to the reduction of carbon emissions.

The IREK II project is commissioned by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV) to foster international cooperation on resource efficiency, and more specifically, the G20 Resource Efficiency Dialogue. GIZ is implementing this global project in selected emerging economies, particularly Indonesia, Argentina, and Mexico.

In Indonesia, the IREK II project is partnering with the Centre for Facilitating the Implementation of Standards of Environment and Forestry Instruments (Pusfaster) of KLHK. This partnership extended the cooperation of GIZ and KLHK during the first phase of the project conducted from 2019 until 2021. The implementation agreement for the second phase of the project was signed by Ms. Yeri Permata Sari, the Head of Pusfaster, and Dr. Gerd Fleischer, the Cluster Coordinator for BMUV-funded projects implemented by GIZ Indonesia. The signing ceremony was attended by representatives from Pusfaster and the IREK II Indonesia project team.

Throughout the project implementation until February 2024, the project activities will be focusing on i) strengthening resource efficiency policies, ii) strengthening the capacity of national industries on resource efficiency strategies, approaches, and measures, iii) recommendations for improved data management in the area of resource efficiency, and iv) intensifying international dialogue and cooperation

processes for resource efficiency in close cooperation with the BMUV.



*The signing ceremony of the implementation agreement for the IREK II project by KLHK and GIZ*

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## Launch of IREK II Activity: Resource-Efficient and Climate Change Material Efficiency Strategies for a Low-Carbon Future in Indonesia

### By GIZ, Initiative Resource Efficiency, and Climate Action (IREK) II

On 16 November 2022, an online meeting was conducted to launch the project activity for “Resource-Efficient and Climate Change Material Efficiency Strategies for a Low-Carbon Future in Indonesia”. It will be implemented by early 2023 by the Initiative Resource Efficiency and Climate Action (IREK) II project in cooperation with the United Nations Environment Programme (UNEP) Secretariat of the International Resource Panel (IRP). IREK II is a global project commissioned by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV).

The activity aims to contextualise the findings and recommendations of the global report “Resource Efficiency and Climate Change: Material Efficiency Strategies for a Low-Carbon Future” (2020) to Argentina, Mexico, and Indonesia, by delving into the specifics of the national priorities and circumstances and highlighting material efficiency strategies with



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the biggest potential for GHG emissions reduction. This activity would also intensify the international exchange of resource efficiency, which is one of the IREK II project's objectives.

In the initial meeting, the IRP members presented the expected outputs and planned follow-up activities that will focus on the residential building sector. The meeting was attended by the main stakeholders of the project activity including representatives from the Ministry of Environment and Forestry (KLHK), Green Building Council Indonesia (GBCI), business associations, the IRP Panel members/experts, UNEP Regional Office representatives, and the IREK II project team.

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## Multistakeholder Exchange to Combat Plastic Pollution using Circular Economy Framework

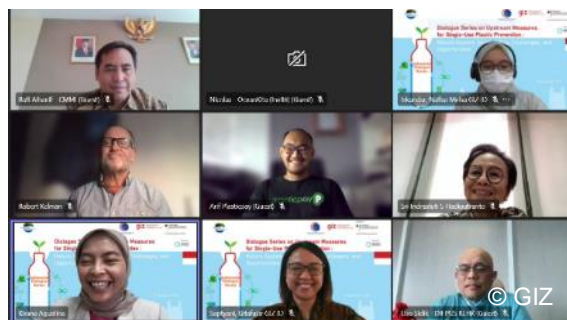
### By GIZ, The Collaborative Actions for Single Use Plastic Prevention in Southeast Asia (CAP SEA) Project

In cooperation with the Coordinating Ministry for Maritime Affairs and Investment (CMMAI), CAP SEA has conducted several multi-stakeholder events ranging from the partnership with Indonesia National Plastic Action Partnership (NPAP) Indonesia to other GIZ Indonesia-supported projects.

The third and fourth CAP SEA dialogue series were conducted on 29 September and 24 November respectively to familiarise Indonesia's stakeholders with the importance of return systems and a more competitive plastic recycling market to prevent the proliferation of single-use plastic in Indonesia.

The Assistant Deputy of Waste Management, CMMAI, Mr. Rofi Alhanif, opened both events with remarks that highlighted the much-needed transformation not only in terms of product design and packaging but also a shift towards a circular system for used products and packaging to achieve the 70% marine debris reduction

target stipulated by the Presidential Regulation 83/2018.



*Panellists on the third CAP SEA dialogue "Return System: State of Play, Opportunities, and Challenges" on 29 September 2022*

Both events revealed that the transformation to a more circular system and more sustainable products is still facing multiple challenges such as the lack of common understanding and vision for plastic management along value chain actors, limited financial investment for infrastructure development, as well as the lack of regulations and policies for implementing circular targets.

Besides virtual exchanges, CAP SEA collaborated with other GIZ projects namely Rethinking Plastic, 3RproMar, and the Prevent Waste Alliance to conduct the "Stakeholder Dialogue and Technical Exchange on Circular Solutions for Indonesia" with support from the CMMAI on 11 October 2022.



*All participants of the Stakeholder Dialogue and Technical Exchange on Circular Solutions for Indonesia on 11 October 2022 in Jakarta*

The event was opened by a speech from Ms. Warthane Puvanarajah, the First Secretary for Climate and Environment from the German Embassy and was attended by more than 80 participants from diverse institutions including practitioners, plastic associations, ministries, NGOs, etc. The event highlighted the critical need to collaborate with all stakeholders along the value chain to leverage the digital system and establish circular economy interventions based



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on the local context, including the improvement of market conditions, strengthening law enforcement, and creating incentives for behavioural change among consumers.

These multiple exchanges have resulted in a transfer of knowledge for plastic management, including not only downstream measures (waste management) but also upstream measures (refuse, reduce, and reuse).

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### Road to G20 Beating Plastic Pollution from Source to Sea: “Enabling Change for Good: Reducing Plastic Waste through Behavioural Change and Nudges that Work”

#### By GIZ, The Collaborative Actions for Single Use Plastic Prevention in Southeast Asia (CAP SEA) Project

In cooperation with the Coordinating Ministry for Maritime Affairs and Investment (CMMAI) and Indonesia NPAP, CAP SEA on behalf of the Indonesian-German Development Cooperation co-hosted the Behaviour Change Session of [Road to G20: Beating Plastic Pollution from Source to Sea](#) together with Unilever Indonesia in Bali on 4 November 2022.



*German Ambassador to Indonesia, Her Excellency Ms. Ina Lepel gave her remarks*

The remarks from the Ambassador of the Federal Republic of Germany to Indonesia, Her Excellency Ms. Ina Lepel, underlined the strong partnership between German and Indonesia to support Indonesia’s commitment to the protection of

healthy lives on a healthy planet and to tackle global challenges such as climate change, biodiversity loss, waste, and pollution, including Indonesia’s commitment to reduce marine plastic debris by 70% by 2025.



*Ms. Tiza Mafira and Mr. Eric Natanael presenting The Jakarta Reuse Movement.*

In this high-momentum event, Germany pledged to continue supporting initiatives in Indonesia utilising multistakeholder platforms such as NPAP to achieve a shared vision of sustainable production and consumption of plastics and environmentally sound waste management.

Following the remarks, CAP SEA’s project partners, GIDKP and Enviu, also presented the lessons learned about reducing single-use plastic from the Jakarta Reuse Movement. The session highlighted the importance of the establishment of reuse infrastructure which includes the development of a reverse logistics system and washing facilities to prevent single-use plastics systematically. Furthermore, Mr. Eric Natanael described the available solutions for reuse services in Jakarta, including Allas, Qyos, Econesia, and Koinpack.



*Appreciation Moment from CMMAI and NPAP*





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In the panellist session, GIZ Advisor, Mr. Rocky Pairunan, provided insights into shared responsibilities through redesigning packaging for fast-tracking behavioural change.

During the closing session of the two-day event, GIZ received a token of appreciation from CMMAI and NPAP on behalf of the Indonesian-German Development Cooperation for its strong commitment and contribution to beating plastic pollution in Indonesia.

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## Stakeholder Consultations for Upstream Measures for Single-Use Plastic (SUP) Prevention

### By GIZ, The Collaborative Actions for Single Use Plastic Prevention in Southeast Asia (CAP SEA) Project

CAP SEA has four work packages for implementation in Indonesia, which include fiscal and economic measures for single-use plastic reduction and packaging waste prevention, the plastic recycling market in Indonesia and guidance for circular product criteria, a pilot project on reuse as a service in the food and beverages sector as well as knowledge dissemination.



*Stakeholder Consultation on Economic and Fiscal Measures on 22 November 2022*

The series of stakeholders' consultations were completed on 22 and 24 November 2022 in cooperation with the Coordinating Ministry of Maritime Affairs and Investment (CMMAI). The events were attended by various key stakeholders from national governments, local

governments, and non-governmental actors, such as the Ministry of Environment and Forestry (KLHK), the National Food and Drugs Agency (BPOM), plastic associations, Oeko Institute, NPAP, and others.

The stakeholder consultation on economic and fiscal measures discussed strengths, weaknesses, opportunities, and threats of four proposed priorities measures, namely partial grants for recycling investments, a deposit return system, tax deductions for (a) using reusable and recycled packaging, and (b) using recyclable plastic materials.

The event on 24 November comprised three separate discussions dealing with (1) the dissemination of a pilot project, (2) the fourth episode of the dialogue series on "Strengthening the Indonesian Plastic Recycling Market", and (3) a kick-off meeting for a study on Design for Recycling (D4R).



*Participants attending the Pilot Project Dissemination event on 24 November 2022*

The first discussion session revealed that the demand for reuse options as a way to prevent SUP in Jakarta is increasing and can be enhanced with the support of regulation, standardisation and incentives for the reuse ecosystem.

To increase circularity, not only reuse interventions are necessary. The afternoon session of the event emphasised that improved data collection, standard development, and incentives for recycling activities in a systematic manner are needed to increase recycling rates and product recyclability in Indonesia.

To this end and through this event, CAP SEA, which is supported by CMMAI, is inviting key experts to be involved in the formulation of feasible D4R guidelines that can be adopted in the Indonesian context.



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*The afternoon session on 24 November 2022 was opened by remarks from Mr. Rofi Alhanif, Assistant Deputy for Waste Management, CMMAI*

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## Ecosystem-based Adaptation Training on the Ministry Level

**By GIZ, Climate and Biodiversity Hub Indonesia (CLARITY Component), Global Project of mainstreaming Ecosystem-based Adaptation (EbA)**

CLARITY in collaboration with the Global Project of Mainstreaming EbA has conducted an EbA capacity-building workshop in Bali from 3 to 7 October 2022, with the attendance of 30 participants from the Ministry of Environment and Forestry (MoEF), the Ministry of Marine and Fisheries (MMF), and the Regional Office of MoEF and MMF.



*Participants of EbA Training 3-7 October 2022, Bali*

The workshop aimed at improving the understanding of the EbA concept, gaining insights into the principal incorporation of climate justice in the EbA process, understanding the valuation of EbA measures and the usage of its result, as well as designing financing options and instruments to sustain EbA measures. Apart from that, the workshops provided insights into

lessons learned, an overview of designing EbA monitoring and evaluation, and how to apply concepts and tools for individual EbA monitoring and evaluation mechanisms.

One of the training programmes included a visit to Batu Lumbang Mangrove Ecotourism Bali, as one example of a community-based mangrove rehabilitation site. Although the site had not been confirmed yet as EbA, it can become one by conducting a climate change impact assessment and proving that the measures are addressing the impact.



*Study visit to Batu Lumbang Mangrove Ecotourism Bali*

This is the first EbA training that will be followed up with an EbA training module and tailored training courses for the local community.

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## Indonesia Net Zero Summit 2022: Engagement through Financial Services

**By WWF-Indonesia, IKI Green Finance Project Asia**

The Indonesia Net Zero Summit took place in Bali on 11 November 2022. The session on “Engagement through Financial Services”, which was arranged by KADIN Net Zero Hub (NZH), WWF-Indonesia and the Carbon Disclosure Project (CDP), was attended by several panellists, including Inarno Djajadi (Head of Capital Market Executive, Financial Service Authority), Kelvin Tan (Head of Sustainable Finance & Investment, ASEAN, HSBC), Michael Tjoajadi (President Director, Schroeders Indonesia), Rosita Uli Sinaga



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(Council Member, Ikatan Akuntansi Indonesia) and Dr. Adam Ng (WWF, Greening Financial Regulation Initiative APAC Lead) as a moderator.

To support the transformation towards a green economy, Kelvin Tan emphasized that “we have a real threat to our existence right now in terms of climate change, as our time is limited.”

In response to climate problems, HSBC has set a net zero target for 2050 with respect to the Paris Agreement. Since HSBC remains in Scope 3, it is committed to cooperating with clients, both regionally and globally. Besides, HSBC has identified opportunities to accelerate climate solutions including green technologies and nature-based solutions with the intention to reduce deforestation and gain support for the financial infrastructure.



*Memorandum of Understanding Ceremony between KADIN NZH and WWF-Indonesia represented by M. Yuzriski (Chairman of the Renewable Energy Committee, KADIN NZH) and Adithya Bayunanda (CEO of WWF-Indonesia)*

Meanwhile, Schroeders Indonesia highlighted the assistance provided to companies through green financing services. After setting a net zero target for 2050, Schroeders Indonesia is committed to carrying out internal monitoring with a science-based framework. They also encourage third parties to jointly monitor the measured emission reduction efforts and achievements.

“We refuse to say what is written in the paper with no progress ever made. These are the things we need to do to meet our targets and therefore, participate in this global movement,” said Michael Tjoajadi from Schroeders Indonesia.

In response to the standardisation of sustainability reporting, the International

Federation of Accountants reported that 20% of the sustainability reports of Indonesia-based companies were audited by independent institutions.

“The problem is that there is no reporting standard that facilitates the work of the auditor. This is a big problem,” said Rosita Uli Sinaga from the Indonesian Institute of Accountants (IAI).

To conclude, Indonesia needs high-quality precision reporting standards. In comparison to the previous G20 event in Italy, IFRS was granted permission to set up a board of standards for high-quality, sustainable reporting, namely the International Sustainability Standards Board. To pursue this goal, Indonesia must carry out similar action to increase its capability to set and align with global standards.



*Dr. Adam Ng (WWF, Greening Financial Regulation Initiative APAC Lead) as a Moderator of the Session on Engagement through Financial Service*

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## KADIN Indonesia and WWF Indonesia to Work Together in Building Financing Solutions for Net Zero Emissions

### By WWF-Indonesia, IKI Green Finance Project Asia

KADIN Indonesia and WWF-Indonesia signed a Memorandum of Understanding that aims to support their common goal in achieving net zero emission goals by involving financial institutions during the B20 Net Zero Summit 2022 in Nusa



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Dua, Bali. The collaboration between KADIN Indonesia and WWF-Indonesia was intended to provide technical assistance, support financing solutions and help the financial institutions to adapt their portfolio to net zero emission goals based on science.



*Figure 1 KADIN NZH and WWF-Indonesia held the first discussion about the Memorandum of Understanding that would soon be signed in Indonesia Net Zero Summit 2022, Bali*

As financial intermediaries, financial institutions play a crucial role in shifting their financial flows towards low carbon business activities and helping their clients to make net zero commitments to mitigate expected transition risks. Therefore, financial intermediaries are highly encouraged to achieve their net zero emission targets and align their portfolio in accordance with the latest results from research and science.

M. Yusrizki, Chairman of the Renewable Energy Committee, said that “the national industry nowadays is demanded to carry out a transition toward net zero. This process requires a large amount of support from all entities. The partnership with WWF-Indonesia aims to help preparing and strengthening the corporate’s ability in achieving the net zero emission target, especially through the involvement of the financial service institution.”

This collaboration is in line with a government programme for reaching carbon neutrality by 2060 or earlier. The Ministry of Finance of the Republic of Indonesia estimates that the budget needed will reach the amount of IDR 28.223 trillion in order to achieve the net zero emission target. The Ministry of Finance noted that governments need other sources of funding due to the fact that the State Budget is unable to cover one-third of the funding needs.

Aditya Bayunanda, CEO of WWF-Indonesia, said, “an attempt to become carbon neutral is not an easy task, and therefore, companies require assistance especially in accessing and receiving funding solutions. In this regard, a facility that connects with the supplier and the needs of corporations is highly required for the transition to happen.”

M. Yusrizki, added that “national companies that carry out the energy transition need funding support for paving the way for a decarbonisation of the industry which is based on the SBTi (Science Based Target initiative) standard.” This collaboration can hopefully help KADIN Net Zero Hub members to access sustainability-linked loans.

In accordance with the WWF Sustainable Banking Assessment (SUSBA) 2021, ASEAN-based banks have attempted to improve the positive impacts for companies whose funding portfolio still remains at the first stage in terms of ESG. The report shows that over a period of four years, banks have improved positively although the changes made were still 40% below the relevant indicator fulfilment.

Therefore, the first-stage of collaboration will mainly focus on strengthening the bank’s ability to cooperate with companies whose aim is to conduct transition targets and to develop suitable product solutions. WWF-Indonesia and the IKBI Secretariat actively promote sustainable finance and are committed to facilitating the funding process with KADIN.

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## G20 Lecture Session: Sustainable Banking and the Role of Youth

### By WWF-Indonesia, IKI Green Finance Project Asia

As part of the “BI Stronger Fest: Green Living Contest” series, WWF-Indonesia in collaboration





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with Bank Indonesia, the Faculty of Economics and Business, University of Indonesia, and the Indonesia Sustainable Finance Initiative (IKBI), held a public lecture at the University of Indonesia with the title “Sustainable Banking and the Role of Youth” on 18 November 2022. Rofikoh Rokhim, Ph.D., Professor for Economic and Business Affairs at the University of Indonesia moderated the lecture and Rizkiasari Yudawinata, Sustainable Finance Program Lead at WWF-Indonesia, was invited as a speaker.



*Rizkiasari Yudawinata as a Speaker at the G20 Lecture Session on Sustainable Banking and the role of Youth*

Prof. Rofikoh encouraged the students to engage more with sustainable finance-related topics as an increasingly important way to foster more responsible business models as demand for this will inevitably be rising.

Throughout the lecture session, Rizkiasari emphasized the impact of climate change on business activities. She stated that “we witnessed the positive progress in tackling climate change, yet our progress is considered still not on track.” Therefore, commitment and concrete actions in tackling climate change will be needed to limit global warming to 1.5 degree Celsius. She further added that “according to the Climate Action Tracker, in 2021, the global temperature increased by 1.2 degree Celsius.”

She further explained the importance of nature and referred to the IPBES report. According to the report, more than 2 billion people rely on wood to meet their primary needs, meanwhile 4 billion people rely primarily on natural medicines for health care and likewise, 70% of the drugs used to treat cancer are natural or synthetic products made from nature.

Moreover, she introduced the framework of WWF Sustainable Banking Assessment (SUSBA) tools and briefly explained that SUSBA can help banks to refine their sustainable finance roadmap and to assess and track their progress on ESG integration, based on public disclosures issued by each bank.

She briefly mentioned that the SUSBA framework comprises several standards and initiatives that include GRI Sustainability Reporting Guidelines, UN Principles of Responsible Banking (PRB), the International Integrated Reporting Framework of the International Integrated Reporting Council (IIRC), TCFD recommendations (Task Force on Climate-Related Financial Disclosures), and the Sustainability Accounting Standards Board (SASB).

In terms of E&S risk management, it is important to note that banks should take the opportunity to develop innovative products and services that support their clients in improving their sustainability performance. According to the 2021 SUSBA, Indonesian banks are still facing difficulties in encouraging their clients to improve their ESG performance.



*Professor Rofikoh Rokhim, Ph.D., from the University of Indonesia as a Moderator of the G20 Lecture Session on Sustainable Banking and the role of Youth*

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# Climate Policy

## Climate Target Setting Foundations: Asia Pacific 1<sup>st</sup> Workshop

**By WWF-Indonesia, IKI Green Finance Project Asia**

UNEP FI in collaboration with WWF-Indonesia and the Indonesia Sustainable Finance Initiative (“IKBI”) and with support from the KADIN NZH held the Asia Pacific 1<sup>st</sup> Workshop under Climate Target Setting Foundations theme on 27 October 2022.

In her opening remarks, Nirnita Talukdar, Sustainable Finance Regional Coordinator for UNEP FI, briefly introduced the key principles for Responsible Banking to align with the Paris Agreement and set measurable impact targets. By joining the Principles on Responsible Banking, banks can enhance their baseline and initial ESG framework to set the necessary climate targets.

The key materials of this workshop were delivered by two panellists, namely Indra Sari Wardhani (Training Coordinator) and Rizkiasari Yudawinata (Sustainable Finance Lead) who are both from WWF-Indonesia.

Indra Sari Wardhani explained the “Key Steps of Climate Target Setting” by emphasising the importance of Climate Target Setting for the following areas:

- Business activities and climate change affect everyone;
- Climate change has a significant impact on business activities;
- Climate change results in natural disaster.

In her intervention, Rizkiasari Yudawinata, spoke about “Measure & Disclose Finance Emissions”. She delivered an overview of different methodologies that a bank can take to measure their emissions and explained about the PCAF, an industry-led collaboration of financial institutions that work together to develop GHG accounting methodologies for emissions in the financial sector, and the Science Based Targets initiative (SBTi) for Financial Institutions. She further elaborated on science-based climate scenario

methodologies that banks can take to set up their emission reduction targets for their portfolios.

During the last session, Octavianus Bramantya from the KADIN Net Zero Hub revealed that KADIN Net Zero Hub is an initiative intended to boost Indonesia’s commitment toward SBTi. He believed that advocacy will not be enough without a strong commitment from Indonesia to achieve its climate goals. Lastly, he mentioned that to achieve this, the financial sector has to play an important role in supporting these efforts.



*Screenshot of the first Climate Target Setting Foundation Workshop, followed by the introductory remarks of Octavianus Bramantya, KADIN Net Zero Hub*

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## UN Recognises Building with Nature Indonesia’s Efforts with World Restoration Flagship Award

**By Wetlands International, Building with Nature Indonesia programme**

The United Nations has recognised the Building with Nature Indonesia initiative to protect Indonesia’s coastlines against flooding as one of 10 pioneering efforts to revive the natural world. The UN designated the push as one of its inaugural World Restoration Flagships under the banner of the Decade on Ecosystem Restoration. The announcement came as leaders gathered in



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Montreal, Canada for the UN Biodiversity Conference.



*The Building with Nature Indonesia team, Yus Rusila Noor, Wetlands International*

In many areas, mangroves have been cut down to make space for development and ponds for fish farming. Concentrating in Demak, a district on the island of Java, Wetlands International together with Indonesia's government and other partners helped local communities regrow mangroves along a 20 km stretch of coastline. Instead of planting mangroves, the initiative applies an innovative approach using semi-permeable sea walls made of natural materials to trap mud and sediments. Mangroves then regrow naturally, with a survival rate of 70 percent – significantly higher than the 15-20 percent of planted mangroves. Over time, soil builds up in the roots of the mangroves, which can prevent rising seas from inundating communities. The work will increase the resilience of 70,000 people to climate change. To address the socio-economic root causes of mangrove loss, the initiative also helped 277 shrimp farmers adapt their aquaculture ponds so that these can coexist with mangroves and improve the sustainability of their operations. These farmers have seen their shrimp yields tripled.

Central to this flagship is the Building with Nature approach, that integrates nature-based solutions into water infrastructure practice. This is achieved by bringing engineers and other specialists together with non-government organizations and communities to tailor nature-based solutions to local conditions.

Pieter van Eijk, the programme head of deltas and coasts for Wetlands International, said: "We are thrilled to win flagship status not only because our experiences from the Demak

Building with Nature project have helped create a formula that can be used in other locations. We convened expertise from across different areas: ecology, engineering, socio-economics and the result is that we have managed to create coastal resilience in an area that was badly hit by flooding. We will now use these lessons to take Building with Nature projects to other parts of Asia."



*Celebration of the World Flagship Award by the communities in Demak, Kuswantoro, Wetlands International*

Watch the [virtual World Flagship gala](#) and read the [full press release](#). To learn more about the project, watch this [video](#) or download these [knowledge products](#). For more information about upscaling efforts of Building with Nature in Asia, visit [this page](#).

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# Sustainable Transport

## The Development of Systemic, Low-Carbon, and Sustainable Urban Transport in Indonesia

**By GIZ, Sustainable Urban Transport Programme Indonesia (SUTRI NAMA) and Indonesian Bus Rapid Transit Corridor Development Project (INDOBUS)**

On 4-5 October 2022, the Ministry of Transportation (MoT), in collaboration with GIZ SUTRI NAMA & INDOBUS, successfully conducted the “Socialisation of Wahana Tata Nugraha (WTN) Award and Technical Guidance for Green House Gas Emissions Reduction Actions” in Surabaya, Indonesia. The event aimed to prepare the formulation and implementation of policies, norms, standards, procedures, and criteria of the urban transport system for MoT’s WTN Award in 2023.

The Wahana Tata Nugraha (WTN) Award is presented by the Government of the Republic of Indonesia, through the Ministry of Transportation, to regions/cities that adequately organise their public transport systems.

Furthermore, the event also sought to provide technical guidance and supervision to the Regional Transportation Agencies on monitoring and evaluating GHG emissions reduction actions.



*Director of Road Transportation, MoT (Suharto) during the Opening Speech*

During his opening speech, the Director of Road Transportation of the Ministry of Transportation, Suharto, said that “2023 marks the beginning of our awakening in a better

transportation arrangement, which balances the rights and responsibilities of each road user. This requires effort, cooperation from all Transportation Agencies, and collaborations between other work units in the respective Regional Governments, including the executive and legislative branches.”



*Participants at the Socialisation of the Wahana Tata Nugraha and Technical Guidance for Green House Gas Emissions Reduction Actions Event*

More than 100 participants attended the event in person, and approximately 400 joined online. Participants came from 25 Land Transportation Management Centres (BPTD) and 34 Provincial and City/District Transportation Agencies in Indonesia.

During the event, the participants eagerly sought information about the WTN assessment procedures. In addition, they actively discussed the transport sector’s existing and planned GHG emissions reduction actions, which will be one of the WTN Award’s assessment criteria.

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# Sustainable Transport

## Sustainable Transportation Forum (STF) 2022: A collective effort to achieve low-carbon and sustainable transportation

### By GIZ, Sustainable Urban Transport Programme Indonesia (SUTRI NAMA) and Indonesian Bus Rapid Transit Corridor Development Project (INDOBUS)

The Ministry of Transportation of the Republic of Indonesia, in collaboration with the Coordinating Ministry for Maritime Affairs and Investment, supported by GIZ, held the Sustainable Transportation Forum (STF) 2022 from 20-21 October in Bali. The forum brought together more than 500 policymakers, local government officials, representatives from the world of academia, communities, and sustainable public transport actors. More than twenty discussion sessions were organised to inspire, encourage and ensure a successful public transport reform and to deliver high-quality public transit services in Indonesia.



*Left to Right: Representatives from Surakarta, MoT, Medan, DKI Jakarta, Semarang, and ITDP (STF 2022, Day 1)*

On the first day, the forum was designed to provide further insights into a collaborative space from across different sectors and stakeholders in creating easy access to mobility in urban societies. It was indicated during the session that the transition from private to public transport could materialise through synergies of the national government, local government, communities, and support from various stakeholders, including donor agencies.

“The Ministry of Transportation is currently supported by many stakeholders, including donor agencies, to ensure the successful implementation of the Buy the Service/BTS programme (the provision of public transport

service from MoT to private public transport operators) and to expand coverage to other cities. Our goal is to make bus users feel as comfortable as when they are using private vehicles,” said the Director of Road Transportation, Suharto.

The second day of STF 2022 consisted of different breakout sessions. The topics included more inclusive and equitable urban transport planning, non-motorised transport (micro-mobility), community-based innovations, grassroots movements in transport, and public transport electrification deployment. Participants selected the breakout sessions based on their interests.



*Speakers and Participants of the STF 2022*

The Head of the Urban Transportation Sub-directorate, Mr. Tonny Agus Setiono, concluded the two-day forum by stating that various long-term programmes with multiple development partners to encourage the implementation of sustainable transport are in place. Collective efforts were identified to establish a collaborative environment to develop and achieve sustainable urban transportation.

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## Towards Semarang, the City for All

### By ITDP, Reducing Emissions through Integration and Optimization of Public Transport in Indonesia

Since 2016, ITDP has assisted the Semarang City government in realising sustainable and equitable transportation. The collaboration started with the identification of recommendations for the development of Bus Rapid Transit (BRT) mass transportation and non-motorised transportation (non-motorised



# Sustainable Transport

vehicles) and continued with the preparation of As Is documents to assess Trans Semarang services using Mayor Regulation No. 3 of 2017 concerning BLU Minimum Service Standards UPTD in 2019. From 2021 to 2022, ITDP continued to assist Semarang with a series of activities entitled “Semarang City Inclusive Mobility”, supported by the International Climate Initiative (IKI). This activity also revived the collaboration between ITDP and Semarang after ITDP had postponed its activities in Semarang for two years due to the Covid-19 Pandemic.



*Submission of Inclusive Mobility Recommendation Documents for the City of Semarang*

Semarang City Inclusive Mobility aims to support the Semarang City Government in initiating and implementing an inclusive urban transportation system, especially for vulnerable groups such as women, children, the elderly, and people with disabilities. The main output of the Semarang City Inclusive Mobility activities is the Semarang City Inclusive Mobility Recommendation, along with supporting documents, namely the Semarang Inclusive Mobility Planning Process and Consensus Towards Semarang City for All. In order to ensure that recommendations cover a variety of needs, representatives from vulnerable groups were involved at each stage of preparing recommendations.

The scope of the recommendation document focuses on the design concept of Trans Semarang bus stops and fleet, as well as pedestrian facilities to include recommendations at each stage of an individual urban transport journey. Before making recommendations, field surveys and preliminary studies were carried out to analyse the existing conditions in Semarang City. At the same time, various discussions with Trans Semarang passengers, such as women and

children, were conducted to collect information on the obstacles they face when using public transport.

The initial findings from surveys and interviews were then presented to the Semarang City Government, namely by the Semarang City Regional Development Planning Agency (Bappeda) and the Trans Semarang UPTD BLU as well as various vulnerable community groups in Semarang. Discussions with vulnerable communities were carried out in focus group discussion (FGD) sessions to understand their mobility challenges. The results of the FGD were analysed and used to determine recommendations. Afterwards, four series of multi-stakeholder dialogue (MSD) activities were held in an effort to finalise the recommendations that will be submitted to the Semarang City Government. The participants who took part in the FGD and MSD varied from representatives of groups of children, the elderly, pedestrian activists, and various groups of people with disabilities. Even at the last MSD, representatives of the participants conducted a joint field survey to re-confirm the MSD records.

On 15 September 2022, the recommendation documents were submitted to the City of Semarang through the Head of Infrastructure Planning and Regional Development, Semarang City Regional Development Planning Agency, Ms. Arwita Mawarti, S.T., M.T and Head of Governance, Social and Cultural Planning, Regional Development Planning Agency City of Semarang, Dra. Sih Wahyu Nurhastanti, MM, at the handover ceremony of the “Semarang City Inclusive Mobility Recommendations” and “Semarang Consensus, City for All” at the Semarang City Hall Office. The ceremony was attended by various other agencies including the Public Works Service, the Environment Service, the Spatial Planning Office, and the UPTD Trans Semarang BLU.

Further information is available [here](#).

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# Sustainable Transport

## TUMI E-Bus Workshop: Indonesia E-Bus Roadmap & Financing Strategy

**By ITDP, Reducing Emissions through Integration and Optimization of Public Transport in Indonesia**

TUMI E-Bus Mission is providing technical support in 21 deep-dive cities and scaling up the initiative to a network of more than 500 cities with the aim of procuring 100,000 electric buses globally by 2025. In Indonesia, in-depth technical support has been provided to Jakarta and seven selected network cities that have received training and capacity-building workshops with the aim of accelerating the procurement of electric buses.

To support capacity-building initiatives in Indonesia's network cities, all TUMI partners including WRI, ITDP, ICLEI, UITP, C40, and ICCT, held dialogue and capacity-building activities aimed at introducing regulations that enable planning and development strategies, stakeholder engagement, and financing strategies from local governments in Indonesia that have started testing electric buses. This dialogue also focused on strategies for overcoming the two biggest challenges of electric bus implementation in Indonesia, which are: developing a road map and setting a long-term vision and financing strategy. The event was organised in a face-to-face format by inviting electric bus experts, relevant stakeholders (bus manufacturers and funding agencies), and local governments, to discuss in depth the electric bus adoption strategy with participants from network cities.

The event was attended by representatives from city and provincial governments in Indonesia which are part of the TUMI network cities including, the Bali Province, West Java Province, South Sumatra Province, Bandung City, Medan City, and Pekanbaru City. Other stakeholders from the Ministry of Finance, the Ministry of Transportation, DKI Jakarta Transportation Service, Bali Province Transportation Service, PT Transportasi Jakarta, PT Penjaminan Infrastruktur Indonesia, PT Sarana Multi Infrastruktur (Persero), the World Bank, KfW Development Bank, Trolley bus

operators, and manufacturers also joined the event.

The workshop was held for three days from 17 October 2022 to 19 October 2022 at HARRIS Vertu Hotel, Harmoni, Central Jakarta. On the first day, the workshop was divided into three sessions. The morning session entitled "City Dialogue: The Role of Local Government in Accelerating the Transition Towards Electricity-Based Public Transportation" was delivered by representatives from DKI Jakarta Province, Bali Province, the Ministry of Transportation, and Transjakarta. In this session, Gonggontua Sitanggang, ITDP Indonesia's Transport Manager, responded to the presentations of the speakers.



*The Director of ITDP Southeast Asia, Faela Sufa, presented material on "Electric Bus Adoption, Financing and Policy: A Case Study from Jakarta"*

The event continued with the afternoon session I "Panel Discussion on E-bus Procurement and Financing Options", which was delivered by representatives from the Ministry of Finance, MCC, ITDP, PT SMI, the World Bank, PT PII, and KfW. In this session, the Director of ITDP Southeast Asia, Faela Sufa, made a presentation on "Electric Bus Adoption, Financing and Policy: A Case Study from Jakarta".

The first day closed with a session entitled "Market Dialogue: OEMs and Electric Bus Operators". It was delivered by representatives from PT INKA, PT Mobil Anak Bangsa (MAB), and the start-up company Transisi.

The second day started with presentations from E-Mobility Manager WRI DC, WRI Finance Expert, ICCT, and C40 Cities that discussed how to adopt electric buses in urban areas, as well as electric bus business models, the prices of electric buses, and legal aspects concerning



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electric buses. The workshop continued with a session entitled “Workshop – World Cafe on the development of an electric bus roadmap and financing strategy”. During this session, each city representative that attended was asked to develop a strategy to improve the electric bus implementation in their city.

In this workshop session, cities held discussions accompanied by facilitators from ITDP Indonesia. Representatives from each city were asked to determine their goals for taking a step towards electric bus implementation, taking into account the current conditions, the characteristics of the city, and the challenges faced. The final result of this session is the creation of an electric bus roadmap concept that contains the stages and stakeholders involved at each stage. The session was closed with a presentation session on the results of the discussion from the facilitators from each city.



*Participants visit the electric bus depot of one of the operators from Transjakarta*

On the third day, the workshop participants were given the opportunity to visit the electric bus depot of one of the operators from Transjakarta. This depot has ten charging stations, each of which has a power of 200kW. At the electric bus depot, several material-related aspects were presented by PT Mayasari Bakti as the electric bus operator collaborating with Transjakarta.

Further information is available [here](#).

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## PT Transjakarta Will Make Pilot a Project for Disabled-Friendly Bus Stops in Bundaran HI and Lebak Bulus

**By ITDP, Reducing Emissions through Integration and Optimization of Public Transport in Indonesia**

PT Transportasi Jakarta (Transjakarta) wants to use the Hotel Indonesia (HI) Bus Stop and the Lebak Bulus Bus Stop for a pilot project on disabled-friendly shelters. The Director of Development and Services of Transjakarta, Lies Permana Sari, said that there are several facilities and the necessary infrastructure at the two bus stops that can be adapted to be accessible to disabled people. “We also carry out Transjakarta inclusiveness efforts with several efforts and several realisations,” she said at the CSW Bus Stop, Kebayoran Baru, South Jakarta, on 20 November 2022.

“Later, Lebak Bulus (stop) and Bundaran HI (bus stop) will become a pilot project for (accessible) Transjakarta shelters for customers with disabilities,” she continued.

According to Mrs. Lies, a number of adjustments to the infrastructure at the two bus stops included the provision of Braille writing. Then, she said, Transjakarta will also provide sign language facilities at the Lebak Bulus bus stop and HI bus stop.

“We will prepare facilities for Braille writing and also sign language facilities so that people with disabilities can feel the inclusiveness of Transjakarta bus stops,” she explained. Mrs. Lies added that as many as 79 % of Transjakarta officers in the field have been provided with a training on how to serve customers with disabilities. Thus, according to her, the majority of Transjakarta officers have the capacity to assist customers with disabilities. After the training Transjakarta is now able to provide inclusive services.





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*PT Transjakarta explain about "Pilot Project" Disabled-Friendly Bus Stops*

"(As many as) 79 % of our operational service staff in the field already understand how to handle, how to assist customers with disabilities. So, this is what we consistently do to improve our service", explained Mrs. Lies. Transjakarta is still continuing the construction of the HI bus stop. There were also some obstacles, as the pavilion from this bus stop was considered to be a visual obstacle to the Selamat Datang Monument at the HI Roundabout which is classified as an object suspected of being a cultural heritage (ODCB).

Further information is available [here](#).

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## Pj. Governor Heru Budi Hartono will build New Bicycle Lanes: "Must be Effective and Efficient"

### By ITDP, Reducing Emissions through Integration and Optimization of Public Transport in Indonesia

The Provincial Government of DKI Jakarta plans to optimise bicycle lanes next year. Acting (Pj) Governor of DKI Jakarta Heru Budi Hartono is committed to evaluating the proposal for improving bicycle lanes.

"We have committed ourselves to evaluate the proposal," he said in the Petogogan Village, South Jakarta on 25 November 2022.

Heru revealed that there were additional bicycle lanes in Jakarta, but not enough. He asked that the addition of bicycle lanes be carried out while also considering effectiveness and efficiency.

"Yes, there is some development, but it must be effective, efficient, and usable," he added.

As it is well known, the Head of the DKI Jakarta Transportation Agency, Syafrin Liputo, confirmed that the bicycle lane budget has been included in the 2023 RAPBD again, reaching the amount of IDR 7.5 billion. Later, a budget of IDR 5 billion will be used for route optimisation activities.

"In the last debate on Wednesday, we again held discussions with Commission B, and a budget of IDR 7.5 billion was allocated," said Syafrin Liputo at DKI Jakarta City Hall, Jalan Medan Merdeka Selatan, Central Jakarta on 18 November 2022.

Syafrin explained that the optimisation of bicycle paths will be carried out based on the results of recommendations from a comprehensive evaluation. Thus, it is possible that there might be additional bicycle lanes as part of the optimisation activities. "Optimisation does not mean not building new lanes, but for example when there is an environmental road that must be connected to a bicycle lane for optimisation, then we will do that," he explained.



*Cyclists on the new bike lane on Patimura Street*

Further information is available [here](#).

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# Renewable Energy/Energy Efficiency

## Clean Energy Finance and Investment (CEFI) Training Programme – 2022

### By GIZ Clean, Affordable and Secure Energy for Southeast Asia (CASE)

The Clean, Affordable, and Secure Energy for Southeast Asia (CASE) project, the Organisation for Economic Co-operation and Development (OECD), and the Energy Transition Partnership (ETP), all funded by the Federal Ministry for Economic Affairs and Climate Action (BMWK), have invited key players for clean energy development in Indonesia to attend the first Clean Energy Investment and Finance (CEFI) Training Programme from 31 October to 4 November 2022 in Bandung, West Java, Indonesia. Attended by more than 80 participants, the training was divided into three training sessions: Renewable Energy (RE), Energy Efficiency (EE), and Financial Institutions (FIs). Together with regulators for Financial Institutions, such as the Financial Services Authority (*Otoritas Jasa Keuangan*) and the Ministry of Energy and Mineral Resources (MEMR), the programme encouraged private developers and lenders to come together to share their experiences and communicate suitable approaches to promote the financing of renewable energy and energy efficiency projects in Indonesia. Beyond the technical training programme, the forum allowed for an exchange of potential partnerships and innovative financing ideas that emerged from the discussions.

CASE was responsible for organising the RE classes and has also supported most of the FIs sessions. By the end of the training, based on the evaluation session, all participants agreed on the strong opportunities to support the Energy Transition from fossil-based energy to renewable energy. All stakeholders confirmed the necessity to implement the energy transition in their respective areas of work: (i) regulators emphasized the need for policies that encourage the financing of renewable energy projects, (ii) developers and private sector companies raised their commitment to apply clean technologies in their companies, (iii) financial institutions and other credit institutions confirmed that they gained a

deeper understanding of clean energy opportunities, and reconfirmed their interest to further develop and plan loans and innovative financing possibilities for clean energy projects.

CASE will organise this training annually until 2024. It might also be implemented in other CASE member countries such as Thailand, Vietnam, and the Philippines.



*Participants at the opening of the 2022 CEFI Training*

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## Biogas Digesters powered by Cacao Waste and Digital Gas Meters

### By su-re.co, Biogas Initiative for Agriculture in Bali and Flores funded by carbon offset

The Biogas Initiative for Agriculture in Indonesia is a project implemented by su-re.co, a Bali-based environmental think-do-be tank. The project aims to reduce emissions by installing household-scale biogas digesters across Bali, Flores, and Java. In total, su-re.co has 40 biogas digesters were installed by October 2022. The project also include capacity-building to ensure the long-term success of biogas adoption while also improving the livelihood of beneficiaries.

After completing installations in Bali and Flores, su-re.co returned to Gunung Kidul, Yogyakarta, to meet with local champions and install more biogas digesters in October 2022. Gunung Kidul is the home of chocolate and also a second home to su-re.co's top-load biogas design. This type is designed to process organic waste and also for an easier and faster installation process. Four more top-load biogas digester were



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installed for Pak Suparjo, Pak Bani and Pak Mugi, Pak Sujarwo, and Pak Rohmadi. Thanks to Pak Paryanto, a local champion, su-re.co can easily install and monitor the biogas. The impulse of local champions is essential to promote clean energy in rural areas.

“This biogas will be useful to utilise the cacao waste and convert the waste into economic and environmental benefits. Previously, we used to dump cacao waste, but thanks to this biogas, we can use it for cooking and producing organic fertiliser,” said Pak Rubani, Secretary of Ngudiraharjo 2 Farmer Group in Gunung Kidul.



*Top-load biogas digester in Gunung Kidul managed by Pak Rubani and Pak Mugi.*

To measure the impact of the biodigesters, su-re.co has installed gas meters in several units. The gas meters collect information on the volume of gas produced by the biogas digester that can later be used for calculating the carbon offset. In October, six gas meters were installed, five in Melaya and one in Yogyakarta. Installing the gas meter could even be carried out remotely by having the farmers watch a simple video tutorial. With the gas meters installed, it is now possible to monitor how much gas is being produced by each farmer per day.



*Gas meter in I Ketut Pas Gunawa's house in Melaya*

As proverbial says, one man's trash is another man's treasure, as long as one has the necessary tools. Combined with digital gas meters, biogas digesters have proven to be the tools that can convert waste into value and digital data. su-re.co's mission does not end here, as more installations and collaborations are planned to fulfil the country's needs. Hopefully, the use of gas meters can accelerate the process.

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Official project information:

<https://iki-small-grants.de/project/biogas-initiative-for-agriculture-in-bali-and-flores-funded-by-carbon-offset/>

**WNT, Indonesia undergoes renewable energy workshop**

**By ICLEI-Local Governments for Sustainability, 100% Renewable Cities and Regions Roadmap (100% RE)**

“Our commitment is an energy system that is entirely sourced from renewables.”

Ir. Zainal Abidin, Head of the West Nusa Tenggara (WNT) Department of Energy and Mineral Resources, reiterated the Indonesian province's goal of achieving a 100% renewable





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energy-based energy system by 2050 during a workshop and project development session for its renewable energy roadmap journey on 29 September 2022.

The workshop was led by ICLEI Indonesia and was attended by the Project Implementation Team and officials from the local government.

Aside from raising stakeholder ownership for the 100% RE Project, the workshop served as a place to consolidate relevant projects and policies throughout the cities, districts, departments, and agencies in the province. Suryani Eka Wijaya, Regional Development Planning Agency (BAPPEDA) of WNT, said that the resulting 100% RE roadmap should be incorporated and highlighted in the Regional Medium-Term Development Plan, a document now in the early stages of development.

Rosmaliati, a lecturer from the University of Mataram, added that further coordination is required between the Provincial Government of WNT and the State Electricity Enterprises (PLN) regional unit regarding the synchronisation of regional renewable energy targets with the electricity business plan.

Niken Arumdati of the WNT Department of Energy and Mineral Resources said during the Project Development Session that priority projects have to consider the local potentials, be profitable, and choose a business model or funding mechanism that aligns with regional realities.

Potential projects have been identified in the [RE and Energy Efficiency Identification and Prioritisation Workshop for Mataram City and Sumbawa Regency](#), the majority of which are solar PV technology-based projects owing to the region's potential.



*The 100% RE team from ICLEI Indonesia and workshop participants, including representatives from the Department of Energy and Mineral Resources, the Regional Development Planning Agency/BAPPEDA of WNT Province, Mataram City, Sumbawa Regency, the Department of Public Works and Public Housing, and the Department of Cooperatives and Small and Medium Enterprises (SMEs).*

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## Solar Ice Maker: Optimising renewable energy to support local fisheries

### By GIZ, Strategic Exploration of Economic Mitigation Potentials through Renewables (ExploRE)

The Ministry of Energy and Mineral Resources (ESDM) through the Directorate General of New, Renewable Energy and Energy Conservation (Ditjen EBTKE), has inaugurated a Solar Ice Maker facility in Sulamu, Kupang Regency, East Nusa Tenggara. Held from 31 October to 1 November 2022, the Solar Ice Maker inauguration was also attended by representatives of the German Embassy in Indonesia. The facility was established to support the optimisation of the potential of the fishery sector in Indonesia's coastal areas.

Sulamu Village, which is located about 80 kilometers from Kupang City, is blessed with abundant fishery potential. The livelihood of most of the community members in Sulamu



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mainly depends on fishery. Unfortunately, this huge fishery potential is hampered by an inadequate cold chain access. Fishermen from Sulamu have had to purchase ice blocks from Kupang to store the fish.



*Ribbon cutting ceremony by Andriah Feby Misna, Director of Various New Renewable Energy, Ministry of Energy and Mineral Resources*

Utilising the renewable energy source which is abundant in the area, the Solar Ice Maker facility in Sulamu was developed as an answer to the cold chain challenge. The development was initiated by the Indonesian-German cooperation, with funding from the International Climate Initiative (IKI) and the German Federal Ministry for Economic Cooperation and Development (BMZ) through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) as well as the collaboration of the private sector and local investors. The development of the Solar Ice Maker technology started in 2017 and was successfully put into operation earlier this year.

Relying entirely on solar power and a small battery system, the Solar Ice Maker in Sulamu can produce up to 1 MT of ice blocks per day, without any fossil fuels. The technology also uses the R290 natural cooler, making it 100 % carbon emission-free. The Solar Ice Maker is an example of how renewable energy can also provide benefits for other sectors other than the energy sector, and how it can support the local economy. The application of renewable energy in various sectors, including fisheries, contributes to Indonesia's effort toward emission reduction as well as to meeting the national energy mix targets.

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## Exploring the Future of Biomethane in Indonesia

### By GIZ, Strategic Exploration of Economic Mitigation Potentials through Renewables (ExploRE)

Biomethane is a versatile energy source that can be used for various purposes. It has the potential to substitute CNG for industrial cooking purposes, it can be used as fuel in plantations and it can replace diesel oil in diesel power plants. In addition, it can also be integrated into natural gas pipelines.

Biomethane is obtained by a biogas refining process, so that it has properties similar to natural gas and contains at least or more than 91% methane gas. Sourced from organic waste, biomethane plays an important role in the efforts to reduce carbon emissions and provides a solution to overcome the impact of pollution caused by industrial wastewater on soil, water, and air.



*A screenshot from the Bioshare Series #8 Webinar on "Exploring the Future of Biomethane"*

To facilitate discussions among renewable energy stakeholders on the potential for biomethane development in the country, the ExploRE Project together with the Directorate General of New Renewable Energy and Energy Conservation (EBTKE) organised the Bioshare Series #8 Webinar, themed "Exploring the Future of Biomethane in Indonesia". The webinar, which was held on 19 October 2022, was attended by at least 280 participants from various regions in Indonesia and speakers from



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various backgrounds. In the first session, the webinar reviewed policies related to biomethane, business licensing, and utilisation, and identified the potential supply-demand for biomethane in Indonesia.

As an agricultural country, Indonesia has a promising biomethane potential. The agro-industry is active in several regions of the country, resulting in a large amount of organic waste produced which can be processed and used as an alternative energy sources. Based on a study by ExploRE, there are eight priority provinces for biomethane development. As mentioned during the Bioshare Series #8 Webinar by Ardian Candraputra, GIZ Advisor, the eight priority provinces are North Sumatra, Riau, Jambi, South Sumatra, Lampung, East Kalimantan, Central Kalimantan, and West Kalimantan.

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## Creating a Path for Green Hydrogen Development in Indonesia

**By GIZ, Strategic Exploration of Economic Mitigation Potentials through Renewables (ExploRE)**

Green hydrogen and its derivative products play an important mitigative role in energy-intensive sectors that are difficult to decarbonise, such as fertilisers, steel, chemical, long-distance transportation, shipping, aviation, and long-term energy storage industries for energy generation. Green hydrogen has the potential to be used as an energy storage medium, especially when there is an overproduction of electricity from weather-dependent renewable energy sources. Electrolyser and fuel cell technologies have seen significant cost reductions, and an increased efficiency and system quality will make green hydrogen more affordable as a potential energy storage medium. This can open up opportunities for the use of Variable Renewable Energy (VRE) technology without

worrying about stability, reliability, and availability of system supply.

The potential on the global market continues to grow as a result of the increased need for green hydrogen, which has a positive impact on the commitments to carbon neutrality by many countries. Due to the abundance of resources, Indonesia has the potential to become a green hydrogen exporting country. Moreover, a centre for green hydrogen trading in Asia.

The development of the 'Hydrogen Economy' in Indonesia is still in its early stages. The government has started to hold policy discussions, encourage initial implementation projects, and prepare policy papers to foster an understanding of the potential and action plans needed to establish an environment that promotes green hydrogen development in Indonesia.



*Participants of the preparation meeting of "Thematic Study on Green Hydrogen Development in Indonesia" posing for a group photo*

To support the further development of green hydrogen in Indonesia, GIZ through the ExploRE project and the Ministry of National Development Planning (Bappenas) have agreed to initiate a "Thematic Study on Green Hydrogen Development in Indonesia" that aims to support the formulation of the National Medium-Term Development Plan (RPJMN) 2025-2029. The main objective of this study is to assess the technical and economic potential of green hydrogen production and the implementation of Power-to-X technologies with a focus on the industrial sector in Indonesia and to submit a policy paper or recommendations for the 2025-2029 RPJMN in the national hydrogen development strategy. The official meeting to prepare for this study was held on 29 November 2022 and involved the Ministry of Energy and Mineral Resources,



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the Ministry of Industry, the National Energy Council (DEN), the National Research and Innovation Agency (BRIN), Pertamina, as well as international consultants, namely Jacobs and PtX Hub Berlin. Currently, the industrial sector is the largest consumer of hydrogen in Indonesia with 87.1 million tons of hydrogen consumed in 2020.

Most of the hydrogen produced in Indonesia is grey hydrogen, which means it is produced from natural gas without carbon capture or Carbon Capture, Utilisation and Storage (CCUS) technology. If this grey hydrogen continues to be the main source of hydrogen in Indonesia, carbon emissions from hydrogen production will double over the next two decades. Thus, green hydrogen has an important role to play in providing cleaner and more sustainable hydrogen.

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## Forestry/REDD+

### G20 Side Event on Peatlands: A global overview of sustainable management in peatlands landscape

#### By UNEP, Global Peatlands Initiative project

Indonesia further advanced discussions on the importance of peatlands in a third G20 workshop/side event held online on 31 October 2022 on “Sustainable Management in Peatlands Landscapes: A Global Overview”.

G20 countries shared success stories on the conservation, restoration, and sustainable management of peatlands linked to community livelihoods, food security, biodiversity, and overcoming land degradation. Leading by example, Indonesia encouraged other G20 countries to prioritise action for the conservation, restoration, and sustainable management of peatlands to recover stronger together.

The event completed a workshop series on peatlands supported by the UNEP-led Global Peatlands Initiative. Indonesia’s commitment to draw attention to the importance of peatlands during their [G20 leadership and Joint Environment and Climate Minister’s Meetings](#) highlights the progress of the implementation of the [UNEA-4 resolution on the Conservation and Sustainable Management of peatlands](#). The sessions have helped to increase awareness among G20 countries about the importance of peatlands for nature and climate action, while also highlighting principles and best practices of sustainable management and the restoration of peatlands.



*Presentation by SPM Budisusanti, Ministry of Environment and Forestry of Indonesia*

Following the opening remarks by the Vice Minister of Environment and Forestry of Indonesia, the panellists from the UK, Germany, EU, and others, shared their experience and knowledge about the multiple benefits from the conservation and sustainable management of peatlands including their contribution to securing livelihoods, food, biodiversity, and a reduced land degradation. They presented examples of sustainable value chains of peatlands products and discussed key factors for decision-making to ensure sustainable livelihoods while also focusing on the peatlands’ conservation and sustainable management.

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### State of the World’s Peatlands – Global Peatland Assessment: Evidence for action toward peatlands conservation

#### By UNEP, Global Peatlands Initiative project

On 17 November 2022, at the UNFCCC COP27 in Sharm El-Sheik, Egypt, the Global Peatlands Initiative (GPI) launched its [Global Peatlands Assessment \(GPA\) – The State of the World’s Peatlands: Evidence for action toward the conservation, restoration, and sustainable management of peatlands](#). The GPA was carried out between 2020 and 2022 as an output of the GPI IKI project and as requested by the [UNEA-4 resolution on Peatlands](#) in March 2019.

Following the inspiring call for action for peatlands by Inger Andersen, Executive Director of UNEP, further calls for action to support the conservation, restoration and sustainable management of peatlands for the climate were made by the Vice-Prime Minister, the Minister of Environment and Sustainable Development of the Democratic Republic of Congo; the Minister of Environment, Nature





## Forestry/REDD+

Conservation, Nuclear Safety, and Consumer Protection of Germany; the Vice-Minister of Environment and Forestry of Indonesia, and the Mitigation Specialist, Climate Change and Desertification of the Ministry of Environment of Peru. They all acknowledged the importance of the GPI and its contribution to filling knowledge gaps through the Global Peatlands Assessment, which is critical for their countries.

"If peatlands are degraded, peatlands can become gigantic sources of emissions," reminded Vice Minister of Indonesia, His Excellency Alue Dohong.

The GPA provides information on peatland distribution, trends, and problems for global peatlands. It includes global and regional chapters, helping to close knowledge gaps presenting the best available scientific findings to inform decision-making for climate change and nature action through the conservation, restoration, and sustainable management of peatlands. An updated Global Peatland Map was also launched as well as topical peatland hotspot maps and cases.

The GPA was made possible through the generous, voluntary contributions of more than 220 experts from 54 different countries. This work marks a deepening of collaboration between world-renowned peatlands experts in all disciplines to update, establish, and jointly communicate the status and value of peatlands.



*From left to right: H.E Eve Bazaiba Masudi, Vice-Prime Minister, Minister of Environment and Sustainable Development of the Democratic Republic of Congo; H.E Alue Dohong, Vice-Minister of Environment and Forestry of Indonesia, and Dianna Kopansky, Global Peatlands Coordinator, UNEP*

"The GPA is such an excellent example, compiling all the scientific findings on peatlands, getting the whole picture. What the peatland family achieved, is that we have a better understanding than years ago," said Jochen Flasbarth, State Secretary at the Ministry for Economic Cooperation and Development of Germany.

"If we're serious about acting on climate change, we must get serious about the protection, restoration, and sustainable management of peatlands," said Inger Andersen, Executive Director of UNEP.

The recording of the event, which was co-organised by the UNEP-led GPI, UNEP-WCMC, MSF/GMC and in collaboration with the Convention on Wetlands, is available [here](#).

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[www.globalpeatlands.org](http://www.globalpeatlands.org)

## Sustainable Finance: Opportunity and challenge for the Conservation and Sustainable Management of Peatland Ecosystems

### By UNEP, Global Peatlands Initiative project

On 17 November 2022, at the UNFCCC COP27 in Sharm El-Sheik, Egypt, the Ministry of Environment and Forestry of Indonesia organised a side event entitled "Sustainable Finance: Opportunity and Challenge for the Conservation and Sustainable Management of Peatland Ecosystems".

The event brought together different stakeholders including representatives from IFAD, The World Bank, UNEP, the Ministry of Environment and Forestry of Indonesia and of Economic Cooperation and Development of Germany to discuss, share information and experiences, as well as lessons learned on sustainable finance options to boost the conservation and sustainable management of peatland ecosystems.



## Forestry/REDD+

During the session, examples of sustainable finance options available for the conservation and sustainable management of peatlands were shared as well as information on how to access them. Panellists gave a status update on the commitment of G20 countries to the conservation and sustainable management of peatlands. They also highlighted the importance of collaboration, for example through the Global Peatlands Initiative to support an exchange of knowledge on sustainable finance options to enhance the conservation and sustainable management of peatland ecosystems for global beneficiaries.



*From left to right: Alue Dohong, Jochen Flasbarth and DG PPKL*

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## National Roadmap of Wetlands Management Document Finalisation Workshop

**By Yayasan Konservasi Indonesia, Mitigation and Adaptation through Conservation and Sustainable Livelihood on Indonesia's Peat and Mangrove Ecosystems (IKI-PME programme)**

The IKI-PME programme continues to support the development of a National Roadmap of

Wetlands (Peatland and Mangrove Ecosystem) Management Document with the Strategic Coordination Team for Wetlands Management (SCT-WM), which is led by the Ministry of National Development Planning. The aim is to synchronise and harmonise the management of the wetlands by all stakeholders (both government and non-government) in order to achieve the Sustainable Development Goals (SDGs) and support a Low Carbon Development.



*National Roadmap of Wetlands Management Document Finalisation Workshop*

The workshop to finalise the National Roadmap of Wetlands (PME) Management Document was held in Jakarta on 19 September 2022 by the Ministry of National Development Planning (PPN/Bappenas) and was also supported by Yayasan Konservasi Indonesia (YKI). The workshop was attended by 85 participants both online and offline, such as the Coordinating Ministry for Maritime and Investment Affairs, the Ministry of National Development Planning, the Ministry of Environment and Forestry, the Ministry of Marine Affairs and Fisheries, the Ministry of Agriculture, the Ministry of Public Works and Housing, the Ministry of Villages, Disadvantaged Regions, and Transmigration, the Ministry of Agrarian Affairs and Spatial Planning, the Ministry of Home Affairs, the Peatland and Mangrove Restoration Agency, the Geospatial Information Agency, the National Research and Innovation Agency, the National Agency for Disaster Countermeasure, Yayasan Konservasi Indonesia, and experts from Yayasan Lahan Basah (YLBA) and CIFOR.



## Forestry/REDD+



*Strategic Coordination Team for Wetlands Management*

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### Focus Group Discussion Series for North Sumatera Peat Ecosystem Protection and Management Plan Document

**By Yayasan Konservasi Indonesia, Mitigation and Adaptation through Conservation and Sustainable Livelihood on Indonesia's Peat and Mangrove Ecosystems (IKI-PME programme)**

Focus Group Discussion (FGD) Series for North Sumatera Peat Ecosystem Protection and Management Plan (RPPEG) Document was held in Medan by the Provincial Regional Research and Development Agency (Bappeda) and was also supported by Yayasan Konservasi Indonesia (YKI) and the University of Sumatera Utara (USU). There were four series of FGD on the development of the North Sumatera Protection and Management Plan Document. The first FGD was held on 11 October 2022 to discuss the usage plan of peat ecosystems. The second FGD was held on 17 October 2022 and dealt with the control of peat ecosystems plan. The third FGD on 21 October 2022 focused on the preservation of peat ecosystems. The mitigation and adaptation plan was at the heart of the last FGD series on 27 October.

The FGD series was attended by the North Sumatera Peat and Mangrove Ecosystem and Management Team (TPPEGM), the Regional Development Planning Agency (Bappeda), and the Services (Dinas) of 9 districts of North Sumatera. The objectives of this FGD series were to deliver the first three chapter of the document, to clarify and gather data and information from the stakeholders for the development of the document, and to discuss corresponding strategies, policy directions, programmes, and activities for peat ecosystem protection and management. The first draft of the document has already been developed and the assignment for the public consultation was held at the office of the Provincial Regional Research and Development Agency, Medan, on 24 November 2022.



*Focus Group Discussion Series for the North Sumatera Peat Ecosystem Protection and Management Plan Document.*

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### North Sumatera Peat Ecosystem Protection and Management Plan Public Consultation

**By Yayasan Konservasi Indonesia, Mitigation and Adaptation through Conservation and Sustainable Livelihood on Indonesia's Peat and Mangrove Ecosystems (IKI-PME programme)**

The public consultation for the North Sumatera Peat Ecosystem Protection and Management Plan (RPPEG) was held in Medan on 29



## Forestry/REDD+

November 2022 and organised by the Provincial Regional Research and Development Agency (Bappeda), with support from Yayasan Konservasi Indonesia (YKI). The objectives of this activity were to provide information on the work stages, process, and the result of North Sumatera's Peat Ecosystem Protection and Management Plan Document and to obtain feedback from the public to enhance and refine the final document. 78 participants attended the public consultation, including representatives from the Peat Ecosystem Protection and Management Plan drafting team, North Sumatera local government agencies (OPD), Districts' representatives, academics, NGOs, private sectors, and media outlets.



*North Sumatera Peat Ecosystem Protection and Management Plan Document Public Consultation*

The public consultation for the North Sumatera Peat Ecosystem Protection and Management Plan was held after many different activities, such as socialisation on 11 February 2022, the kick-off meeting on 18 April 2022, a drafting team meeting on 6 June 2022, a coordination meeting with national and district level authority on 30 June 2022, a socio-economic Focus Group Discussion (FGD) on 18 June 2022, Geographic Information System (GIS) training on 26 and 27 July 2022, field surveys in August and September, and the FGD series on 11, 17, 21, and 27 October 2022. After the public consultation and a revision of the document, the final document will be legalised by the Governor of North Sumatera followed by socialisation.



*Participants of the Public Consultation*

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## Mangroves and Blue Carbon Market Opportunity

**By Center for International Forestry Research (CIFOR), Yayasan Konservasi Indonesia, Mitigation and Adaptation through Conservation and Sustainable Livelihood on Indonesia's Peat and Mangrove Ecosystems (IKI-PME programme)**

Mangroves are one of the crucial blue carbon ecosystems with the ability to store four to five times more carbon than tropical rainforests. Indonesia has approximately 3.3 million hectares of mangroves (based on the National Mangrove Map published by the Government of Indonesia). However, mangroves are facing tremendous pressure from human activities, like unsustainable economic activities that also have an impact on the climate, biodiversity, and the livelihood of the local community.

Therefore, the conservation of intact mangroves and the restoration of degraded mangroves requires serious and coordinated actions from relevant stakeholders. The Center for International Forestry Research (CIFOR) organised a side event at the Global Landscape Forum (GLF) Climate 2022 titled "Mangroves Blue Carbon Market Opportunities" on 12 November 2022 in Sharm El Sheikh, Egypt. The session brought together representatives from various backgrounds to explore the blue carbon opportunities of the mangroves in Indonesia and worldwide. Cases like the mangroves in Indonesia could be used to meet national emission reduction targets stipulated by the





## Forestry/REDD+

Nationally Determined Contributions under the Paris Agreement and the UN Decade of Ecosystem Restoration.

This session covered topics on the biophysics aspects of mangroves, financial strategies for blue carbon, sustainable and equitable governance for the protection of the blue carbon ecosystem, and opportunities for blue carbon project development. Four experts with various backgrounds joined the session, i.e., Virni Arifanti, Senior Researcher at the National Research and Innovation Agency of the Republic of Indonesia (BRIN); Sonny Mumbunan, Lead Economist at the World Resources Institute (WRI), Mas Achmad Santosa, Co-Founder and CEO of the Indonesia Ocean Justice Initiative (IOJI), and Steve Crooks, Principal for Wetland Science and Coastal Management at Silvestrum Climate Associates. This session was moderated by Daniel Murdiyarso, Principal Scientist at CIFOR.



*From left to right: Moderator, Daniel Murdiyarso from CIFOR with two session speakers Sonny Mumbunan from the World Resource Institute and Virni Arifanti from BRIN during the discussion session at GLF Climate 2022*

Virni Arifanti discussed a case study from her research in the Mahakam Delta, Kalimantan, Indonesia, about intact mangroves that had been converted into aquaculture ponds. She explained that converted mangroves emit a large amount of greenhouse gases, especially CO<sub>2</sub>, and that the conversion process can have a negative impact on the soil carbon storage. Based on these results, she emphasized the urgency of conserving intact mangroves. “From this study, we can conclude that mangrove conservation is very important because mangroves can store carbon stock and sequester carbon, and if it’s converted, they

can emit a specific amount of emission,” explained Virni.

Another important aspect of the blue carbon market refers to financial strategies/arrangement for a blue carbon market. “There are four key financial strategies for blue carbon; (1) blended finance by leveraging development finance and philanthropic funds and support from public finance and investments; (2) catalysing emerging domestic initiatives at scale for blue carbon mangroves by deepening the scheme of Debt-to-Nature swap; and (3) looking at blue carbon financing as an integral part of development planning and financing,” said Sonny Mumbunan.

Mas Achmad Santosa shared the importance of a sustainable and equitable governance for mangrove protection in Indonesia. During his intervention he suggested that the national framework for the blue carbon ecosystem in Indonesia should be strengthened and that there is a need for the clear distribution of roles and functions at the institutional level, which will help to ensure a public participation in blue carbon. He also argued that blue carbon governance cannot be separated from its enforcement.

The last speaker, Steve Crooks shared information on blue carbon markets and project development. Crooks explained that the demand for the blue carbon project is high both at a national and global level because of its social and ecological benefits. He also explained that the private sector plays an important role in developing a blue carbon project.



*Hybrid setting during the GLF Climate 2022 Session Mangrove Blue Carbon Market Opportunities, Egypt, 12 November 2022*





## Forestry/REDD+

The event concluded with a discussion session that dealt with topics such as blended finance and blue carbon project development. Throughout the session, 812 participants joined on-site and online. Full video recording of this event is available [here](#).

The top five countries in terms of participation were Indonesia, India, Egypt, Kenya, and the Philippines. For this event, the team also produced a white paper titled “Making Blue Carbon Count: Market Opportunities for Mangrove Restoration”. The white paper has been downloaded 39 times. The full text is available [here](#).

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## SUPA/REPEAT Component 1 organises GIS training for Peatland Mapping in Lao PDR and the Philippines

### By GIZ, Sustainable Use of Peatland and Haze Mitigation in ASEAN (SUPA)/REPEAT Component 1

One of the main strategies for conserving peatlands focuses on mapping and monitoring. This enables experts and policymakers to know where peatlands are located (location and extension) and to monitor changes in their condition. Based on this information, effective strategies and action on the ground can be taken to reverse peatland degradation and initiate an intervention for restoration, if needed. Mapping peatlands also helps countries to plan and better manage this carbon-rich ecosystem. Without accurate nation-wide peat maps, managing peatlands will be very difficult.

Geographic Information Systems (GIS) refer to computer systems used for capturing, storing, checking, and displaying data on the Earth's surface. In GIS, different satellite images that are sensitive to the bio-physical properties of peatlands can be integrated to map and estimate the extension of peatlands.



**GIS Training for Peatland Mapping**

3-4 November 2022, Quezon City, Philippines

© GIZ

### *Participants of “GIS Training for Peatland Mapping in the Philippines”*

To ensure that ASEAN Member States have the knowledge and skills to map their peatlands, GIZ organised a “GIS Training for Peatland Mapping” in the Philippines from 3 to 4 November 2022 and in Lao PDR from 7 to 9 November 2022, where technical experts from Cambodia, Thailand, and Vietnam also joined. The objective of the training is that relevant technical staff will be better equipped to develop the necessary skills and produce detailed peatland maps at the end of the training.

The training topics included 1) the identification of suitable data sources, 2) data collection, 3) the use of different thematic layers from different sources, and 4) methods on how to process remote sensing data for the identification of potential peatlands. Part of the training focused on the use of remote sensing software like eCognition for object-based image classification and GIS.

For the training in Lao PDR, a field trial was organised to learn about image data acquisition by using a drone, and to undertake further evaluation and interpretation. The aim was to evaluate when and how drone data can complement conventional sampling methods, for example in the case of inaccessible areas.

“I am excited to expand this mapping activity across Lao PDR with the SUPA component 1 project,” said Phingsaliao Sithiengtham, one of the participants from Lao PDR. “Knowing more about our peatlands will help us prioritise our actions to conserve them.”



## Forestry/REDD+



*Participants of the “GIS Training for Peatland Mapping in Lao PDR”*

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### For Future Generations: Environmental education about Peat Ecosystems in the Kubu Raya Regency, West Kalimantan

#### **By World Agroforestry (ICRAF) Indonesia, Peat-IMPACTS Indonesia**

Peat Education, why is it Important? The peat ecosystem in the Kubu Raya Regency is a natural resource that plays an important role in people's livelihoods. Unfortunately, peat ecosystems are often poorly managed due to a lack of knowledge about their characteristics and best management practices. As a result, various problems such as fires and the destruction of natural habitats often occur. Therefore, the Kubu Raya Regency Government and World Agroforestry (ICRAF) Indonesia joined forces with the #PahlawanGambut programme of Peat-IMPACTS to try to convey knowledge about peat management needs through formal education as early as in elementary school. However, despite extensive research, the existing results still need to be further reviewed and adjusted so that they can be understood by school children.

ICRAF has been part of the process of developing the local peat curriculum. The process was jointly initiated with the Kubu Raya Regency, which is one of the most forward-

looking and progressive districts in educating its young generation, through the Education and Culture Office. After a long process that involved the determination of the scope of the curriculum, the adjustment of the existing curriculum, the development of teaching material, a test period, and a final adjustment, the curriculum was eventually launched at the event “Launching the local content curriculum for peat and mangroves in Kubu Raya Regency” at Gardenia Resort, Kubu Raya, on 30 November 2022.



*Certificate of appreciation for cooperation and support during the process of compiling and developing the Kubu Raya peat curriculum*

Dr. Sonya Dewi, the Director of ICRAF Indonesia, expressed her deepest gratitude and appreciation to the Government of the Kubu Raya Regency for its strong commitment and consistency towards the preservation and sustainability of peat ecosystems in the Kubu Raya Regency.

She added that last year, Indonesia had just committed itself, like the global community, to the Long-Term Strategy for Low Carbon Development and Climate Resilience. One of the important things is Indonesia's commitment to achieve carbon neutrality by 2060. In other words, Indonesia needs to achieve net zero cumulative emissions and sequestration. In the document, the word “peat” is mentioned 27 times, far more often than “biodiversity” and even “conservation”. This shows that peat ecosystems have been recognised as playing an important role in achieving Indonesia's climate change management targets.



## Forestry/REDD+



*The launching ceremony of the peat curriculum was carried out with all the stakeholders involved*

The Regent of Kubu Raya, Muda Mahendrawan, said that he took pride in the fact that for the first time peatlands had been integrated into the school curriculum in Indonesia, particularly at the elementary and junior high school levels.

The success of compiling the content on local peatlands for the curriculum cannot be separated from the active participation of teaching staff, school managers, supervisors, and development partners in the process. This active partnership is important to continue to build and maintain the future development of content on local peatlands.



*More than 650 participants attended the official launching event*

Strengthening the capacity of teaching staff in understanding peat ecosystems and developing teaching materials is key to implementing the peat curriculum at the district level; and for learning about and understanding peat ecosystems for all students in the Kubu Raya Regency, West Kalimantan.

The Kubu Raya Regency will continue to implement peat education in Kubu Raya with the spirit of simultaneously encouraging innovation to help young Indonesians understand and implement the knowledge they acquired at school in protecting peat ecosystems for the welfare and environmental sustainability in Kubu Raya, West Kalimantan, Indonesia.

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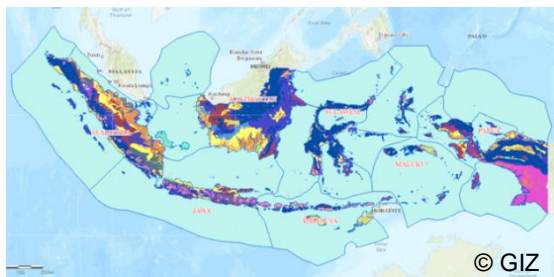


# Biodiversity

## Biodiversity Baseline Formulation in selected Ecoregions for the preparation of IBSAP Post 2020

**By GIZ, Climate and Biodiversity Hub Indonesia (ClimB Component)**

Indonesia is the largest tropical archipelagic country located between two continents (Asia and Australia) and two oceans (Indian and Pacific) with more than 17,000 islands. Geologically, Indonesia is traversed by the Pacific ring of fire which causes Indonesia to have many active volcanoes. Biogeographically, Indonesia forms an area that has a massive landscape and high biodiversity, which has an effect in the function of its ecosystems. An Ecoregion is determined based on its climatology, physiography, flora and fauna, geography, natural resources, and other natural aspects. In addition, Indonesia also forms an ecoregion that separates the biogeography of Asian from Australasia flora and fauna with Wallace Line and other biogeography lines such as Weber and Lydekker. The management of Indonesia Ecoregions is divided into 7 (seven) Ecoregions including 11 Fisheries Management Area (*Wilayah Pengelolaan Perikanan/WPP*).



*Indonesia biogeography lines Weber and Lydekker*

Due to all these reasons, Indonesia has become one of the most Mega-Biodiversed countries in the world. Indonesia has 15.5% of the world flora (80,000 plant spore species and 30,000-40,000 seed plant flora species), 10% of butterfly in the world (1,900 species), 8,157 vertebrate fauna species (mammals, birds, herpetofauna, and fishes) and the highest

endemicity in the world in birds, mammals and reptiles.

The book *Kekinian Keanekaragaman Hayati Indonesia* is the only “official inventory” describing Indonesia’s biodiversity. It can answer strategic questions that frequently arise in society, i.e. (1) the type and amount of biodiversity in Indonesia, (2) the distribution of biodiversity, and (3) current biodiversity management. However, the diverse characteristics of the bioregion in Indonesia require more focus of information in specific regions. The mentioned book was written back in 1983 for the bioregion of Sumatera and in the ‘90s for the Ecoregion Papua. The acceleration of science and technology development, particularly in taxonomy or biosystematics, demands a validation of data. The update is not limited to the biodiversity of ecoregions but also covers the role of biodiversity, biology indicator, biology and hydrometeorological disaster and biodiversity loss. The assessments on protection and rescue, challenges, and economic value can provide strategic steps to overcome biodiversity issues for Indonesian well-being. This information can enrich the important matter of this updated book.

From this perspective, the Bappenas component (ClimB) of the Climate and Biodiversity Hub Indonesia collaborated with the National Research and Innovation Agency (BRIN) to develop the update of the biodiversity status in selected Indonesian Ecoregions as a baseline for the Indonesian Biodiversity Strategy and Action Plan (IBSAP) Post 2020. Through this collaboration, the Sumatera and Sulawesi Ecoregion Biodiversity Status has been a model and the representation for western-eastern of Indonesia region. The project has conducted a FGD and site visits to launch this activity, while obtaining existing data and understanding the capacity of representative unit management.





# Biodiversity



*Tangkahan, Mountain Leuser National Park*

An introduction meeting for the Sumatera Ecoregion was held in Medan and Tangkahan, Mountain Leuser National Park on 12-14 October 2022 with the participation of relevant ministries/institutions, universities, local government, and related NGOs. The same activity was also conducted on 22-25 November 2022 at the Wakatobi National Park, Southeast Sulawesi for the Sulawesi Ecoregion. The participants observed the collaborative conservation management of Sumatran Elephant (*Elephas maximus sumatrensis*) at Mountain Leuser National Park and the green sea turtle (*Chelonia mydas*) at Wakatobi National Park together with the National Park officers and local communities. The local communities not only engaged in preservation actions but also became ecotourism organizers. The participants also gathered various preliminary data and information from stakeholders regarding the identified ecosystem type, species population and distribution. Furthermore, BRIN will facilitate the collection of data and information about the bioecology, social aspects, and policies in these two ecoregions.

The efforts to assess ecoregional biodiversity status will have an impact in the policy scenarios and strategies for managing Indonesia's biodiversity that are fit in to the problems at the site level. Apart from that, the participants found out how biodiversity become a supporting system for community livelihood and regional development. The assessment is expected to be an important

scientific evidence to be used as a source of information for formulation of the IBSAP Post 2020 and plays a major role in the future scenario policy of the Indonesia Biodiversity Governance.



*Kaledupa Island, Wakatobi National Park*

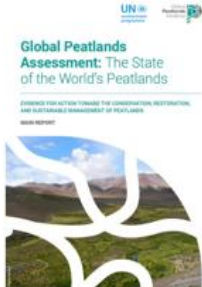
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# Knowledge Products


## By UNEP – Global Peatlands Initiative project

<p>“Global Peatlands Assessment – The State of the World’s Peatlands: Evidence for action toward the conservation, restoration, and sustainable management of peatlands”</p>	<p>The GPA is the most comprehensive assessment of peatlands to date. It has been developed by the UNEP-led Global Peatlands Initiative, in collaboration with UNEP-WCMC, the Greifswald Mire Centre, the Ramsar Convention, FAO, and other GPI members, supported by a group of 226 peatland experts from all regions of the globe to establish the state of the world’s peatlands.</p> <p><a href="#">Global Peatlands Assessment – The State of the World’s Peatlands: Evidence for action toward the conservation, restoration, and sustainable management of peatlands.</a></p>	
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## By GIZ, Initiative Resource Efficiency and Climate Action (IREK) II

<p>Material Efficiency for A Sustainable Factory – A Case from Indonesia</p>	<p>The video highlights the importance of material efficiency for reducing carbon emissions. It also features good practice examples from an Indonesian company, PT Solusi Bangun Indonesia Tbk (SBI), that produces construction materials such as cement and concrete. The video provides examples of Indonesia’s contribution to improving resource efficiency and to a circular economy, and how this links to carbon emission reduction.</p> <p><a href="https://www.youtube.com/watch?v=R5wXltYhz4A">https://www.youtube.com/watch?v=R5wXltYhz4A</a></p> <p>Contact: Anindya Dwi Wulandari (<a href="mailto:anindya.wulandari@giz.de">anindya.wulandari@giz.de</a>)</p>	
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## By ITDP, Reducing Emissions through Integration and Optimization of Public Transport in Indonesia)

<p>Jakarta’s TUMI #eBusMission Series November Issue</p>	<p>As we are recovering from the COVID-19 pandemic, we must choose an exemplary scenario for how our city will develop. ITDP and the University of California, Davis, have released research results that resulted in four future scenarios for cities. However, there is only one scenario that can consistently limit global temperature rise to less than 1.5°C and avoid the worst effects of climate change, namely the Compact City – Electrified.</p> <p>An integrated and electrified city is a densely developed city, with a land use mix that focuses on public transportation, cycling, and walking. By 2040, all new motorised vehicles will</p>	
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# Knowledge Products

	<p>be electrified. One of the focuses and priorities of this project in terms of electrification is bus electrification.</p> <p>The “Jakarta’s TUMI #eBusMission” series, which will be released regularly, will keep you updated on the progress and the latest news regarding bus electrification in Jakarta and Indonesia.</p> <p>Contact: Faela Sufa (<a href="mailto:faela.sufa@itdp.org">faela.sufa@itdp.org</a>)</p>	
Semarang City Inclusive Planning Process	<p>In the context of the activity “Inclusive Mobility of the City of Semarang”, ITDP Indonesia produced two reports that will be submitted to the Government of Semarang City and the people of Semarang City in general. The two documents in question are the Semarang City Inclusive Planning Process Report and the Semarang City Inclusive Mobility Recommendation. These two reports are expected to be an inspiration and the first step in planning synergies between the Government of Semarang City and the people of Semarang City, especially for vulnerable groups.</p> <p>The report demonstrates the results of documenting the process as well as the results of an initial study conducted to reveal the issues faced by vulnerable groups in the City of Semarang when traveling either by walking, cycling, or using public transportation.</p> <p>Contact: Faela Sufa (<a href="mailto:faela.sufa@itdp.org">faela.sufa@itdp.org</a>)</p>	
Semarang City Inclusive Mobility Recommendations	<p>This document contains recommendations that have been prepared by taking into account the special needs of various vulnerable groups in urban mobility. The points presented in this book will hopefully contribute to a more comfortable, secure, and safe public transport system for all the citizens of the city of Semarang, especially the most vulnerable residents.</p> <p>To further analyse these findings, four Multi-Stakeholders Dialogues (MSD) were held with vulnerable residents of the City of Semarang, resulting in the “Semarang Consensus, a City for All”.</p> <p>Contact: Faela Sufa (<a href="mailto:faela.sufa@itdp.org">faela.sufa@itdp.org</a>)</p>	

# Knowledge Products



<p><b>Executive Summary: Fuel Price Increase and Its Impact on Public Transportation and Renewable Energy Policies</b></p>	<p>In response to rising fuel prices and their impact on public transportation and renewable energy policies, the Institute for Transportation and Development Policy (ITDP), the Indonesian Transportation Society (MTI), the Committee for the Elimination of Leaded Gasoline (KPBB), and the Institute for Essential Services Reform (IESR) have worked together to release points to responses and recommendations to the central government and city governments to reflect this increase in fuel prices as a momentum for policy change.</p> <p>Contact: Faela Sufa (<a href="mailto:faela.sufa@itdp.org">faela.sufa@itdp.org</a>)</p>	
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## By Yayasan Konservasi Indonesia, Mitigation and Adaptation through Conservation and Sustainable Livelihood on Indonesia's Peat and Mangrove Ecosystems


<p><b>Feasibility Study for Sustainable Finance in South Sorong, West Papua (English and Indonesian Version)</b></p>	<p>Provided in English and Bahasa. Explanation of a case study on social forestry development in the Konda District, West Papua. This study elaborates the possible payoff and risks to implement a sustainable financing mechanism.</p> <p>Contact: Anderi Satya (<a href="mailto:asatya@konservasi-id.org">asatya@konservasi-id.org</a>)</p>	
<p><b>Sustainable Investment Action Plan for West Papua</b></p>	<p>Covering several studies, mapping, and an assessment related to the conservation areas and stakeholder involvement to implement the project in West Papua.</p> <p>Contact: Anderi Satya (<a href="mailto:asatya@konservasi-id.org">asatya@konservasi-id.org</a>)</p>	
<p><b>North Sumatera Peat Ecosystem Protection and Management Plan Infographic</b></p>	<p>Concise explanations of what North Sumatera Peat Ecosystem Protection and Management Plan is, why it is needed, why it is important for North Sumatera, and the process of its development.</p> <p>Contact: Anderi Satya (<a href="mailto:asatya@konservasi-id.org">asatya@konservasi-id.org</a>)</p>	




# Knowledge Products

<p><b>Benefits of Peat Infographic</b></p>	<p>Standing banner infographic explains the benefits of peat. There are five benefits mentioned in the infographic.</p> <p>Contact: Anderi Satya (<a href="mailto:asatya@konservasi-id.org">asatya@konservasi-id.org</a>)</p>	
<p><b>IKI-PME on Konservasi Indonesia Website</b></p>	<p>IKI-PME on the page of the National Initiative Program of Yayasan Konservasi Indonesia's website.</p> <p><a href="https://www.konservasi-id.org/inisiatif-program-nasional/iki-pme">https://www.konservasi-id.org/inisiatif-program-nasional/iki-pme</a></p>	


## By the Center of International Forestry Research (CIFOR), Mitigation and Adaptation through Conservation and Sustainable Livelihood on Indonesia's Peat and Mangrove Ecosystems

<p><b>White Paper Making Blue Carbon Count: Market Opportunities for Mangrove Restoration</b></p>	<p>This is part of a session held at the Global Landscape Forum (GLF) 2022: Frontiers of Change in Sharm El Sheikh, Egypt and online on 12 November 2022, named "Mangrove Blue Carbon Market Opportunities". This white paper discusses mangroves as an important source for blue carbon in the national and global context and how this ecosystem can be beneficial for community livelihood.</p> <p>Link: <a href="https://www.globallandscapesforum.org/making-blue-carbon-count/">Making blue carbon count (globallandscapesforum.org)</a></p> <p>Contact: Kania Rahayu (<a href="mailto:K.Rahayu@cgiar.org">K.Rahayu@cgiar.org</a>)</p>	
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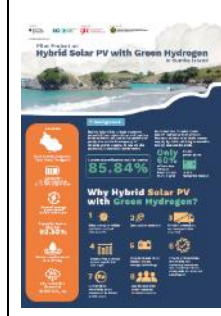
## By GIZ, Collaborative Actions for Single-Use Prevention in Southeast Asia (CAP SEA)

<p><b>DKI Jakarta City' Reusable Packaging Baseline Research Study on Food Delivery</b></p>	<p>This report discusses the findings of a survey on the baseline practice of food delivery in the context of a CAPSEA pilot project in Jakarta that tested reusable packaging for food (beverage) delivery of ready-to-eat food. The baseline survey explores the customers' perceptions and demand for a continuation of the pilot project as well as a potential expansion to other catering businesses/similar business models.</p>	
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# Knowledge Products

	<a href="#">DKI Jakarta City' Reusable Packaging Baseline Research Study on Food Delivery   Knowledge Hub for Green Technologies (greentechknowledgehub.de)</a>	
<b>Qualitative Assessment of Reusable Food Packaging</b>	<p>This report provides an assessment of Allas' business model using qualitative methods through interviews with Allas' subscribers and Allas' partners as well as observations on online communication media of Allas and their partners, such as Instagram accounts. The data was analysed to identify the environmental impacts of Allas' business process and how these impacts influence Allas' economic performance.</p> <p><a href="https://greentechknowledgehub.de/publications/qualitative-assessment-reusable-food-packaging">https://greentechknowledgehub.de/publications/qualitative-assessment-reusable-food-packaging</a></p>	

## By GIZ, Strategic Exploration of Economic Mitigation Potentials through Renewables (ExploRE)

<b>Factsheet: Solar Ice Maker (English)</b>	<p>Summary of key information on the Solar Ice Maker pilot project in Sulamu, East Nusa Tenggara. The factsheet covers info on the background of the pilot project, innovative aspects of the technology, benefits, the context of Sulamu, the project timeline, and all partners involved in the implementation process.</p> <p>Link: <a href="#">Factsheet: Solar Ice Maker (English)</a></p> <p>Contact: Emy Aditya P.S (<a href="mailto:emy.sari@giz.de">emy.sari@giz.de</a>)</p>	
<b>Factsheet: Solar PV Hybrid with Green Hydrogen</b>	<p>This factsheet provides a highlighted summary of the pre-feasibility study on hybrid solar PV with green hydrogen in Sumba.</p> <p>Link: <a href="#">Factsheet: Solar PV Hybrid with Green Hydrogen</a></p> <p>Contact: Satrio Swandiko P. (<a href="mailto:satrio.prillianto@giz.de">satrio.prillianto@giz.de</a>)</p>	



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