

# TIMBER TRANSFO

The Timber Transformer exhibition curated by The Built Environment Trust in London explored the complex story of how the sustainable production of timber in Indonesia is not just about preventing illegal logging – it is about producing sustainable communities, healthy institutions and new encounters with the world. A BE:Report

# FORMER





The devastation of rainforests is not a simple problem in that its effects are widespread. It is an ecological problem, a climate change problem, an economic problem, a trade problem, a social problem, a governance problem, a community problem, a labour problem, a trade problem. The UK's Department of International Development and the European Union, with the Indonesian government as a pioneer, have designed a system to try and repair the damage done to people and trees by the practice of illegal logging. It's an approach that could build communities in the forest as well as creating better building around the world.

The power of markets is the simplicity of their accounting of what matters, of profit and return on investment, "they can be deaf to the protests of residents, spokespersons of future generations," writes Michel Callon, Pierre Lascoumes and Yannick Barthes in *Acting in an Uncertain World*. "But it's also what marks their limit."

Our tale in the following pages concerns trying to create a market in timber products that works for people, plants and the planet. This undertaking by the UK Department of International Development, the European Union and the Indonesian government begins to address the problem of illegal logging that can only be fully grasped through the web of destruction it creates.

It has been estimated around 24 million hectares of Indonesian forest were destroyed between 1990 and 2010 – that is an area approximately the size of the whole of the UK. The impact of this ranges from contributing to climate change on a global scale to damaging people and communities on a local scale. The uprooting of trees through illegal logging creates profound dysfunction in the ecology of people and plants, where biological, economic and social systems are disrupted. Yet to simply say "stop the logging" is often not viable:

people who live in the forest need to earn a living from the forest. They can often become the best defenders of the forest in the process and the forest can be managed sustainably and in turn it sustains and develops the community.

In contrast, illegal logging creates an atmosphere and environment of corruption in which the social relations between people become disfigured by the carelessness and cheating that comes with everyday criminality, and distrust in the institutions of the State grows.

Value is extracted from communities, both in terms of its natural resources and in terms of deskilling, as local methods and knowledge of working with the forest are erased. People are desocialised and what sociologists call "social capital" – the trust, sense of obligation and co-operation – eroded. Robert Putnam writes in *Bowling Alone* that social capital helps us perceive how our fates are linked together, individual problems are recognised as wider problems to be tackled collectively, it's understood that, "people often might be better off if they cooperate, with each doing her share."

Which is why the International Labour

Office produced its *Decent Work in Forestry* report on work in rural economies – the lives of vulnerable people (especially women and children) are made more vulnerable by hazardous and destructive practices such as illegal logging. Decent Work means people aren't exploited, where their contribution and skills are valued it also builds social capital. And it is why practices such as Social Forestry have been fostered by DFID and the Indonesian government, where local communities get to manage the forest, and have the rights to it in certain places, using their own methods of silviculture to maintain and regenerate it.

The success of the newly regulated timber supply between the EU and Indonesia will depend on the success of the market for legal wood that governments at both end of the supply lines are helping generate, working with organisations such as the Timber Trade Federation in the UK, and various others. In Indonesia, it is vital that the network of social capital, Decent Work and the voice being given to local communities takes root. In *Acting in an Uncertain World* the writers map the process whereby

the ideas or technologies which are successful in creating a market, they are the result of experimentation and they are constructed by many different kinds of people – specialists, lay people and even non-human actors. In this case a key non-human, living participant in the process are the trees and wildlife of the rainforest. New forms of social relations, in Indonesia, Europe and the UK, can emerge by being more attentive to the fate of the natural world we all depend upon.

## TREE SPECIES AND ECOSYSTEM DESIGN

The Indonesian rainforest is an extraordinary piece of evolutionary design that supports 10% of the world's flowering species, 12% of the world's mammals and 16% of the world's reptiles. While having only 1.3% of the world's landmass it has at least 20% of the earth's biodiversity.<sup>1</sup> However, factors such as illegal logging and deforestation for other commodity uses threatens this.



Deforestation impacts human beings directly: both locally and across the planet in terms of climate change; threatening the estimated 40 million rural citizens who depend on forest biodiversity for subsistence needs; and as many of our medicines were originally discovered in plants, with deforestation the healthcare resource of flora also disappears. Trees are the heart of the ecosystem. The Woodland Trust estimates that the UK has 50 species of native trees and shrubs – in contrast, Indonesia has 4,000 species of trees growing in 19 different forests types ranging from coastal forests to heath forests and savannahs.<sup>2</sup>

120 hardwood species are suitable for commercial use in products such as plywood, pulp and paper, mouldings and joinery, furniture, sawn timber and veneer. The seven main species are meranti, keruing, teak, mahogany, bangkirari/yellow balau, merbau and balsa. The trees arise through the dense ecosystem of the tropical rainforest in four main layers, each forming a unique habitat of organisms. With little sunlight, life on the forest floor is supported by decaying matter and as the soil is low in nutrients trees have shallow, wide roots. The open spaces of the under-storey features young trees and leafy herbaceous plants that have adapted to grow in little sunlight. The canopy, the roof of the rainforest, is formed by the crowns of the trees which can grow to around 135 feet above ground and the sunlight enables the canopy to support 90% of organisms in the rainforest – it is the primary layer. The canopy created by the trees captures sunlight and holds moisture. The emergent layer features the tallest trees up to 200 feet high where it is hot, windy and wet. The resistant qualities that tree species have evolved to survive in the rainforest make their tropical hardwoods extremely durable in our very different climate.

## NAMING THE CHANGE

Governance of sustainable tropical timber begins not just in the forest but in meeting rooms around the world: with forest sector stakeholder representatives from civil society groups, governments and private sector deliberating on principles of forest management and forest governance, sustainable production, local laws and rights and the protection of habits and biodiversity. The EU's FLEGT Action Plan – Forest Law Enforcement, Governance and Trade (FLEGT) opposes illegal logging by establishing regulatory mechanisms that aim to ensure the trade of legally produced timber and timber products. Like growing a tree, deep change takes time. It took 15 years from the 2001 ministerial conference in Bali to the issuance of the first FLEGT license from Indonesia on 15 November 2016. The FLEGT license represents an important step in the journey from sapling to product, guaranteeing the sustainable use of forests that benefits all those connected to it. Indonesia is a pioneer, the first to issue FLEGT licences and currently the only country to issue licences, with more countries to follow. Producing timber legally has a ripple effect way beyond the woods used in building products. FLEGT has been designed to incorporate sustainable forest management, improve forest governance, strengthen land tenure and access rights for local communities. It gives a voice to all those connected to the forest when developing strategies and policy. Transforming the infrastructure around which timber is harvested and produced not only benefits the forest but also benefits the communities and individuals for whom illegal logging casts a long shadow.

<sup>1</sup> cbd.int The Convention on Biological Diversity theguardian.com/environment/gallery/2013/may/22/indonesia-international-bio-diversity-day-in-pictures

<sup>2</sup> The Food and Agriculture Organisation, United Nations fao.org/



📍 Sustainable timber trade regulation may open up more diverse use of the timber choices. Currently a very small range of rainforest species are commercially available, applied in a relatively narrow range of usage.

IMAGE COURTESY OF TIMBER TRADE FEDERATION

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Illegal logging also dissolves the social bonds and trust between people, wider communication and the state.

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## THE IMPACTS OF ILLEGAL LOGGING

The numbers tell their own story: 24 million hectares of forest was destroyed in Indonesia between 1990 and 2010.<sup>1</sup> Many more millions of hectares were degraded. A 2007 United Nations Environment Programme report estimated that 73–88% of timber logged in Indonesia was illegally sourced. Illegal logging impacts a whole network of interrelated people, places and cultures:

- *loss or degradation of forests, affecting habitats and biodiversity*
- *wider implications for climate change*
- *loss of government revenue*
- *undermining the rule of law*
- *unsustainable employment and income for communities*
- *lack of recognition for the rights of local people to land and access.*

Governance and civic values are undermined as illegality encourages corruption and it effects the economy in three key ways: the economy is deprived of the tax to reinvest in people; illegal logging drives down timber prices for legal loggers; distorts the market and increases the likelihood of conversion to other commodity land use, such as palm oil, cattle, soy. It is why Trade stands for the final letter in FLEGT. Trade is a vital component in addressing the problem. The EU buys 11%, by value, of timber products and paper exported from Indonesia. Indonesia supplies 33% of the EU's tropical timber imports by value. Establishing a credible system of production and licensing which guarantees the provenance of timber means sustainable use of resources and makes it easier for businesses in the EU to import legal timber products.

## PEOPLE AND THE FOREST

The scale of deforestation from illegal logging in Indonesia was unprecedented. A study highlighted by *Time* magazine with researchers from the University of Maryland discovered that Indonesia lost six million hectares of its rainforest between 2000 and 2012.<sup>2</sup> It is not just the devastation of the forests and the animal and insect life the supports it – the impact on human beings is economic, psychological and social. The damage caused by illegal logging goes beyond the immediate and highly visible destruction of the forest. It is the wealth extracted from the local community who don't benefit from the commerce, taxes and new skills that comes with investment in legal business and trade. Illegal logging also dissolves the social bonds and trust between people, wider communities and the state. With Indonesia having the world's third largest area of rainforest, the scale of the illegal logging and its impact on climate change hits twice over.

Changing the timber industry with FLEGT has a butterfly effect that ripples change through the economic, the social, the citizen, the environmental, the climate and the planet as a whole. And in order for it to work the transformation means creating the intangible but essential material of "trust". The benefits are derived not just from enforcing law – it needs to be good law that's seen as fair, because the enforcement process depends on the engagement of communities. Monitoring and auditing the supply chain generates involvement of civil society as a whole. Building a legally robust supply chain also develops the durable and meaningful partnerships



between people, business and institutions. FLEGT is a response to a whole ecosystem in crisis of forests, wildlife and people. By supporting, protecting and developing the natural ecology, FLEGT helps the human ecology too, from forest dwellers in Indonesia to business in the UK ... and the planet as a whole.

## SYSTEM OF TRANSFORMATION

To combat illegal logging and make sure that every step of the timber production process is carried out with the highest regard for people and the environment requires a robust and transparent system that is embedded in legal compliance at every point of the supply chain. The process created by the Indonesian government is SVLK – Sistem Verifikasi Legalitas Kayu. In English, it means Timber Legality Assurance System. The system has been produced through multi-stakeholder dialogue, which includes government, business,

IMAGE COURTESY OF TIMBER TRADE FEDERATION

Non-Governmental Organisations, labour organisations and local communities. The SVLK system comprises of five key interrelated components: **Legality.** Producers must have all their land-ownership documentation, environmental permits and administrative records in legal order. **Production.** Businesses must have the capacity to adhere to the practices of Sustainable Forest Management (SFM) throughout the production cycle, including forest fire prevention. **Environmental.** The forest ecosystem, natural resources and biodiversity must be protected. **Social.** Empowerment through capacity building, local communities are embedded within the system including ownership rights and access to resources and trade. **Certification.** From January 2013 it became mandatory for wood panel, woodworking and pulp and paper industries to be compliant with the SVLK Indonesian certification scheme. Sawmill, furniture and handicraft businesses had until January 2014. One of the key strengths of the SVLK is the oversight provided by independent monitoring and periodic evaluation. Non-Governmental Organisations are empowered to be able

to critically and independently evaluate and verify adherence.

### CORE PILLARS OF THE FLEGT

## ENVIRONMENT SUSTAINABILITY

Where once "sustainability" simply expressed a general desire to take care of the environment, contemporary sustainability strategies and policies take account of a more complex ecology – effective environmental strategies must also be effective socially and economically to be sustainable. Forest management as promoted by the Association of Indonesian Forest Concessionaries aims to guarantee the forest's sustainable economic, social and environmental purpose. Legal logging as part of the sustainability strategy will help reduce carbon emissions from wanton forest degradation and will enhance forest carbon stock. Where the ecosystem has been restored, there is the maintenance

Monitoring and auditing the supply chain generates involvement of civil society as a whole.

<sup>1</sup> The European Commission  
<sup>2</sup> Time magazine July 1, 2014

and growth of biodiversity with species such as the rhinoceros hornbill, the agile gibbon and the slow loris beginning to thrive again. In order to encourage sustainability, the forest area in Indonesia is divided up between 18% devoted to conservation, 25% that's protected and 57% to production. Sustainability is also enhanced through the promotion of silviculture. There are many different types of silviculture using different methods of tree cutting – selective cutting, clear cutting, strip cutting – but they are all practised with a view to tending forest rather than seeing it simply as a material resource. Silviculture is a regenerative practice of forest management. Under the SVLK, state forests are certified against the Sustainable Forest Management Certificate/Sertifikat Pengelolaan Hutan Produksi Lestari (PHPL). PHPL sets out key preconditions for sustainability under SVLK, focusing on the social, production and ecological aspects of forest management. This includes long term forest plans for harvest and regeneration and implementation of protected zones for species and habitats. Social aspects include conflict resolution, labour rights and fair and equitable benefit distribution.

### CORE PILLARS OF THE FLEGT

## ECONOMIC

As the industry expands through regulated and managed logging, government revenue increases through taxation enabling investment in the wood products industry, which also drives the development of skilled labour. FLEGT also gives access to global markets and helps the economic development of the country as a whole. For the economy to work for the benefit of everyone, there needs



Sustainable forest management preserves species diversity, as flora and faunas have highly localised interaction with the more than 3,000 tree species that exist across at least 19 different Indonesian forest types.

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A study highlighted by *Time* magazine with researchers from the University of Maryland discovered that Indonesia lost six million hectares of its rainforest between 2000 and 2012.

to be clarity and transparency around land ownership and rights for logging. Then there must be commitment to the monitoring of timber flow, from harvesting in the forest through production and to the ports for export. With good regulation in place, the economy benefits in many ways: not just from the money that can be re-invested from the taxation of legal timber, or from the earnings going directly to the right communities, but also businesses who can invest in the production process and increased skills and capacity.

#### CORE PILLARS OF THE FLEGT

### SOCIAL

A vital component of the FLEGT process in Indonesia is the role of social forestry. It operates on many levels. It tackles issues of landscape and ownership, better enables the skills and knowledge of local people and takes into account the different scales of community management. The Indonesian government established the Social Forestry Initiative, under which 12.7 million hectares of forests are allocated for community-based forest management. This ensures that indigenous communities have a stake in managing sustainable forests, whether that is in state, private or customary law forestry. In many developing countries with large forests, official law can sometimes conflict with customary law that has developed within forestry communities over time. This Initiative helps balance those interests. Social forestry involves accessing the knowledge and skills of local communities in overseeing the running of the forests. It reinforces Principle 22 of the United Nations' 1992 Rio Declaration on Environment and Development: "Indigenous people

and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development." The government gives support and incentives to customary law communities to manage their forests. There are five types of social forestry. **1.** Community forests – community-managed state forests. **2.** Community plantation forests – community-managed plantations in state forest areas using the silviculture practice based on an understanding of the life history of the forest and knowledge of local factors. **3.** Village forests – village-managed state forest areas to benefit village economy. **4.** Customary law forests – customary law community-managed forests within state forests that have been recognised as private forests. **5.** Forest partnership – contractual partnership between communities with forest concessionaires to manage and utilise forest products. The forest, as a sustainable living thing, has generated a network of people, skills and practices to support it.

### SOCIAL FORESTRY IN PRACTICE

Social forestry encompasses many strands, from involving communities in mapping to improving their capacities in forest management. Non-governmental organisations such as Genesis in Bengkulu Province, Sumatra, facilitates training on participatory mapping to delineate social forestry area in partnership with local communities and Forestry Management

Units. They provide training in sustainable forest management for communities and FMU managers in business planning. Currently Genesis – an Indonesian NGO, is facilitating farmer groups in processing permits for their community-based forest management. The Forest Management Units were established by the Ministry of Environment and Forestry to ensure local communities have the skills to implement these sustainable forest management practices locally. The issue of skills is a practical, managerial and social issue. The International Labour Office highlights both the value of green jobs and the green economy but also the issues that illegal logging ignores such as the risk and dangers of forest work. Social forestry doesn't just happen in the forest, it extends its social connection right through the supply chain – consider the work supported by a UK timber agent purchasing door blanks, working with the Indonesian mill PT Kutai Timber to support growth of commercial timber species within community forests. The mill supplies saplings to local community groups, these saplings are then grown on within local community forests. Tree

growing is part of a wider sustainable ecology, as the trees provide shade for other crops that are grown underneath such as coffee, ginger, cassava, mangoes, chilli, sweet potato and bananas. The mill will then buy back the trees, and profits from these products are used to fund bursaries at a local school. FLEGT helps to create circular, local economy, boosting investment, providing jobs and enabling a sense of ownership.

### MAKING SURE STANDARDS ARE MET

The standards set out by SVLK are designed to ensure timber legality and sustainable practices by formally controlling the chain of custody. This includes barcode tracking of timber and timber products, as one means of maintaining evidence of legality. In order to maintain the standards, set out under the SVLK, the individuals and

organisations involved in this process (producers, traders, processors and exporters) are audited by verified assessment bodies. In addition to monitoring the components within the SVLK, there is a secondary layer of oversight provided independently by civil society groups. This independent monitoring offers a necessary oversight of the private sector and government involved with SVLK and forms an integral part of SVLK. It consists of 111 Independent Monitoring Organisations and 1,941 Individual Independent Monitors made up of NGOs with legal status and communities living in proximity of the forest. Monitoring is undertaken throughout the supply chain and acts to guarantee that SVLK implementation and the timber and timber products produced are in accordance with the applicable regulations. Alongside this independent monitoring, periodic evaluation maybe conducted annually or biannually (depending on the type of forest/scheme). These regular checks are carried out by the government and act as an assurance measure that all aspects of the SVLK are functioning properly. Establishing this



extensive body of knowledge requires archiving and recording and the Ministry of Environment has developed an online database – SILK (Sistem Informasi Legalitas Kayu), the Timber Legality Information System. This system is a way of linking all relevant part of the chain within government, customs, trade and forestry, to validate each transaction through the supply chain.

### TRANSPARENCY

All these new kinds of relationships between, people, businesses, forests, timber, products, audits and compliance are dynamic. To understand what is working and what isn't, to help policy, environmental and economic decision-making, requires sophisticated methods of gathering and tracking data. The Ministry of Environment and Forestry has developed the Sustainable Production Forest Information System (SI-PHPL). This is a publicly accessible tracking and assessment tool, which reassures and strengthens forest governance, and provides transparency and accountability in managing forest resources. The Sustainable Production Forest Information System works through the gathering and sharing of information at every point of production and creation of value, from the data produced by the logging of timber to the assessment of data that makes the policy that shapes how the data transforms the system again. There are six main points of interaction in which data is formed and transformed from the system and feeds back into it.



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The disability-access friendly boardwalk in Youghal, County Cork, Ireland. Tropical hardwoods are widely used in challenging outdoor applications due to their resistance to damp and corrosive conditions, properties resulting from the close grain and natural oils

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Taking care of the natural world and how things are made, takes care of all of us.

 Youghal boardwalk, County Cork, Ireland. Abbey Woods provided the bangkirai decking, a marine hardwood, with stainless steel fixings, replacing a structure destroyed in storms.



CONAL THOMSON/FINDRAME

## SUSTAINABLE HORIZONS

The network created by trees, silviculture, social foresters, craftspeople, NGOs and governments is only sustainable when it creates another node that enables the flow of materials and income for the local community. High profile usages such as the hard-wearing decking made from Indonesian bangkirai, provided for the Titanic Belfast tourist attraction on the site of the old Harland and Wolff Shipyard matters in marketing. Or the Indonesian marine ply used in the award-winning Pod Gallery completed in 2014 by Stonewood Design as part of the restoration of the Grade II Listed Home Farm Barn in West Littleton near Bath.

In a sustainable commercial and biological ecology, the natural world provides durable resources for people to live with care for what's around us. The disability-access friendly boardwalk in Youghal, County Cork, Ireland, is a 400 metre hardwood panelled beach walk-way running from the Front Strand Beach to Claycastle Beach. The original boardwalk was destroyed in a violent storm in 2014, but bangkirai decking is likely to prove more resilient to storms, tidal surges and the movement of sand as this tough decking will be held in place with steel pylons driven deep into the beach. Taking care of the natural world and how things are made, takes care of all of us. 🌱

*All images, except where otherwise credited, courtesy of the Timber Trade Federation. The Timber Transformer exhibition, curated by The Built Environment Trust, was at The Building Centre, London, February through April 2018.*

  
**3498**

forest-based enterprises and industries are SVLK certified

  
**100**

percent of timber harvested in natural forest concessions as well as 100% of timber from plantation forest concessions are SVLK certified

  
**4804**

FLEGT licences for timber products issued 15 NOV 2016 through December 2016

  
**125.8**

Value in US dollars of FLEGT-licensed timber products with a weight of 1.7m tons, up to December 2016

## Data Formations

 Forest concession and permit holders or owners of private/community forests report all transactions of timber, from inventory, harvesting, trading and transportation – they no longer have to manually provide reports.

 Downstream timber-processing industries, traders or timber depots.

 The legality verification bodies who verify reports from forest concession permit holders or private forest owners and industries. This verification is essential for the documentation required for export.

 The Production Forest Management Agency (BPHP) co-ordinates with Provincial and District Trade and Industry offices to gather and supply data on primary and processing timber industries.

 The Provincial Forestry Offices accesses data from the system to monitor the circulation of timber product within their jurisdiction.

 The Director General for Sustainable Production Forest, the administrator of the system manages the data and develops policies regarding the use and access of the system.