How spatial planning and land administration reduce deforestation – an Indonesian case study

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Key words: spatial planning, land administration, deforestation, climate change, land restoration, indigenous peoples, tenure security, biodiversity

SUMMARY

LEI has a nearly 30-year history of partnership in Indonesia, and the recently closed Papua Spatial Planning project has been a particular highlight. This project was established under the leadership of the United Kingdom's Foreign, Commonwealth and Development Office (FCDO) in partnership with the Government of Indonesia's Ministry of Home Affairs and implemented by Land Equity International and Daemeter. The Reducing Deforestation through Improved Spatial Planning in the Papuan Provinces project – better known as Papua Spatial Planning – had the key outcomes to:

- Revise and agree spatial plans for Papua and West Papua provinces and four districts with clear distinction of conservation and development/cultivation areas implemented in an accountable and transparent manner;
- Better recognise the customary (*adat)* territories of Papuan indigenous peoples and communal community management of forest in Papua and West Papua spatial plans, integrated and formalized into Papua development plans;
- Secure national support to protect Papua forest and support Papua provinces in their low carbon development pathway.

With deforestation and land use change historically accounting for as much as 80% of Indonesia's total emissions, improved spatial planning has an important role to play as a facilitating mechanism to shift the development paradigm to enable sustainable growth whilst curbing carbon emissions.

This paper reports on the project successes and challenges, particularly reflecting on implementation actions that were most impactful. It further elaborates on how spatial planning and land administration contribute to reducing deforestation, reflecting particularly on social equity, participation, capacity, tenure and livelihood security and the interplay of different levels of government.

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1. SETTING THE SCENE: REDUCING DEFORESTATION THROUGH IMPROVED SPATIAL PLANNING

Deforestation and land use change account for much of Indonesia's total emissions. Indonesia has significant potential to curb carbon emissions through improved spatial planning as a facilitating mechanism to shift the development paradigm towards lower carbon pathways.

Understanding this, the Reducing Deforestation through Improved Spatial Planning, abbreviated as Papua Spatial Planning (PSP) was established as a collaborative effort between the Government of Indonesia and the Government of United Kingdom, implemented in partnership with Land Equity International and Daemeter. The project established a Technical Assistance Facility providing support for improved spatial planning and low carbon development, with a focus on Papua and West Papua provinces. The project team provided support and influence across national through to sub-national levels, fostering transparency and constituency in spatial planning processes and promoting national policy buy-in through dialogue and strategic engagement. Project outcomes included:

Project outcomes

- Revised and agreed spatial plans for Papua and West Papua provinces, clearly defining conservation and development areas;
- Better recognition of Indigenous peoples customary *(adat)* territories and communal community management of forest in Papua and West Papua spatial plans;
- Secured national support to protect Papua forest and support Papua provinces in their low carbon development pathway.

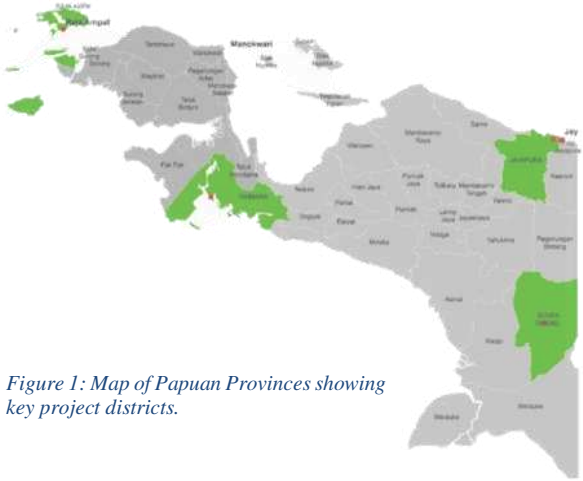


Figure 1: Map of Papuan Provinces showing key project districts.

As well as activities at provincial level, district level activities were implemented across four districts, being Boven Digoel, Jayapura, Kaimana, and Raja Ampat (see Figure 1).

2. WHAT EXACTLY IS SPATIAL PLANNING?

Before delving too deeply into the project, it is useful to cover off on some quick definitions. First and foremost, 'planning" is a bit of a slippery term, with a broad range of ever-evolving and geographically specific meanings. It can cover land-use and management of specific land designations (such as protected areas management or water catchment management),

development of urban policy or reference to urban or regional planning (also referred to as town and country planning) (Gleeson & Low, 2000, p. 12). So let's delve a little deeper.

2.1. Land use planning

A number of authors have traced the evolution of planning across various jurisdictions (e.g. Albrechts, 2004; Bedner, 2016; Olesen, 2014). Loosely, these authors see some form of ordinance or land-use restriction emerging as the first planning step, at the city or municipality level. Such steps emerge as a command-and-control type mechanism to address increasing densities and development pressures. This ordinance or restriction ultimately evolves into land-use planning, which seeks to control the "location, intensity, form, amount and harmonization of land development required for the various space-using functions: housing, industry, recreation, transport, education, nature, agriculture, cultural activities" (Albrechts, 2004, p. 744). Land use planning has typically been limited to, or at least focussed on, the municipality or city-region scale. It is typically inclusive of, and closely linked to, the development of a master plan, which sets out how a particular area can develop, and will be managed so as to develop a certain way, into the future (UN-Habitat, 2016).

As top-down, localised 'control' mechanisms, land-use planning and associated instruments have a number of limitations (e.g. Albrechts, 2004). Firstly, by a focus on regulation (including restrictions and zoning) land-use planning is unable to encourage and ensure desirable developments where and when needed. Master planning can, to an extent provide this link, but is limited in its implementation, coverage and capacity to do so. Secondly, land-use planning, on its own, is unable to integrate sufficiently with other policy fields. Without such integration, other sectors can disrupt plan implementation – either consciously or unconsciously. Thirdly, it concentrates too much on 'hard planning' – being a focus on physical solutions to physical challenges, to the neglect of softer, and typically more inclusive, approaches.

Why does this matter? Because we want holistic spaces that achieve high-level goals of equity and inclusion, and that respond to policy intent – especially where that is multidimensional. For example, in the context of Indonesian forests, there is a need to protect the biodiversity and carbon reserves within forest areas, but also enable local economic growth, promote the livelihoods and opportunities of forest-dependent people and ensure protection of indigenous peoples rights, women's rights and the rights of other groups dependent on forest spaces.

Further nuance is evident in local cultural or institutional interpretations. Land use plans in the European Union have a rigidity and inflexibility through their legally binding nature, reducing responsiveness to changing circumstances (Pettersson & Frisk, 2016). In contrast, frameworks and regulatory plans in the UK are subject to parliamentary discretion (Albrechts, 2004)– allowing greater flexibility, possibly at the expense of transparency and certainty. Understanding different options is important for nations exploring new planning frameworks – particularly in the context of differing capacity levels between different levels of government.

2.2. Spatial planning

Throughout the literature there is some confusion between jurisdictions as to whether spatial planning equates with, or is something more than, land-use planning. In the European context,

spatial planning is seen as a shift towards the spatial integration of sectors and policies, transcending silo-ism (Todes, Karam, Klug, & Malaza, 2010). In other cases, such as Indonesia, there is less of a distinction (Moeliono, 2011). Regardless, *strategic* spatial planning encompasses this sectoral integration and more. Albrechts (2004), somewhat theoretically, defines strategic spatial planning as overcoming some of the limitations of planning practice, seeing it as a '*public-sector led […] sociospatial […] process through which a vision, actions, and means for implementation are produced that shape and frame what a place is and may become'* (p. 747). Strategic spatial planning is posed as more democratic and inclusive, cross-sectoral and hierarchical, pragmatic and decision-focussed. In contrast to land-use and master planning, there is much more emphasis on stakeholder participation (Todes et al., 2010). Strategic spatial planning supersedes a control- or welfare-state focus on land-use, to instead provide a flexible, contextually-tailored "*set of concepts, procedures and tools"* (Albrechts, 2004, p. 748). Arguably strategic spatial planning should be less deterministic than land-use planning with solutions 'unfolding' in the sense of the integral urbanism of Ellin (2006, p. 10) however there is a push-pull nature within planning between the perceived need for control and organic growth and innovation.

Allmendinger & Haughton (2012) identify a gap between the theory and practice of planning in terms of insufficient guidance to implementers as to how to ensure equitable participation and to account for political biases and incumbent power structures (Metzger, Soneryd, & Hallström, 2017) – ie: ensuring that planning is for and by the people. This support for implementation and practice is of particular importance to less-developed countries where both government and professional (planning) capacity is weaker, and informality is widespread. Naturally, superficial engagement processes are much easier to implement than in-depth (Allmendinger & Haughton, 2012, p. 90) providing for an 'inclusion illusion'. Ultimately, this foreshadows that planning is ultimately a product of cultural forces (Hudalah & Woltjer, 2007; Olesen, 2014; Shaw & Lord, 2007) in the same way that space can be seen to be socially and culturally produced (Amin & Thrift, 2002). With this discussion in mind, let's move to the context of spatial planning in Indonesia.

3. SPATIAL PLANNING IN INDONESIA – THE THEORY

Indonesia, is an emerging middle-income country, with a population (2023) of over 237 million people; with 57% living in urban areas. There is considerable literature on the Indonesian planning system, representative of attention and intent to continue improving (e.g. Bedner, 2016; Hudalah & Woltjer, 2007; Moeliono, 2011; Monkkonen, 2013; Rahmawati, 2014).

Formal planning in Indonesia effectively commenced (in urban areas) with the Dutch Town Planning Ordinance of 1948 (Bedner, 2016). This established a decentralised, sectoral approach to planning until the introduction of Spatial Planning Law 24/1992 (Hudalah & Woltjer, 2007). The intent of this law was the development of an integrated, hierarchical, top-down planning system that extended across the Indonesian territory (Bedner, 2016). It identified a number of core principles that closely align with accepted good practices, including participation, just compensation, integrity, sustainability, openness, equality and legal protection (Rukmana, 2015). In implementation, however, the 1992 Spatial Planning Law was

not adequately supported. No supporting procedural regulations were introduced, a national spatial plan was finalised only in 2008 and the ultimately incomplete adoption of the law saw the promotion of privatisation rather than government cross-sectoral cooperation (Bedner, 2016; Hudalah & Woltjer, 2007). Importantly for the forestry space, the then Ministry of Forestry retained its independence, continuing a plurality within Indonesian land law, through the ongoing distinction (and control) of forest land from non-forest land.

The Spatial Planning Law was again updated in 2007 (Spatial Planning Law 26 of 2007), as a result of a renewed emphasis on decentralisation. Provincial and district governments were given explicit authority, coordination was encouraged, and a principle of accountability embedded within the law to promote transparency and strengthen service provisions within government. The 2007 Law refers to the concept of 'penataan' which encompasses both determining and managing spatial use – Article 1 of the Law explains that Indonesian spatial planning consists of three interrelated activities, namely: spatial planning (perencanaan), spatial utilization (pemanfaatan) and spatial utilization control (pengendalian). Article 2 of the Law further articulates that spatial planning is built upon key principles including sustainability, protection of the public interest and legal certainty and justice. Administratively, the spatial planning system in Indonesia can be described as shown in Figure 2. It is hierarchical, consisting of national, provincial and district/city level spatial plans, with lower administrative level plans required to adhere to the content of higher administrative levels. The spatial planning system further serves as a reference for development planning, infrastructure policies and land use, hence there is a defined need for spatial plans to integrate with development plans.

Finally, the Omnibus or Job Creation Law Number 11 of 2020[1], had further implications for spatial planning, with changes made to how spatial plans are developed and passed – including the integration of terrestrial and marine spatial plans into a single plan, how land use permits are assigned and sanctions for environmental damage. Particular impact has been felt in terms of time pressures to spatial planning processes, with the Law stating that if certain deadlines are not met, then higher levels of government may take over the spatial planning process.

4. SPATIAL PLANNING IN INDONESIA – IN PRACTICE

How does spatial planning work in practice then?

4.1. Structure and processes of spatial planning

The hierarchy of Indonesia's spatial plans is as follows:

(1) National spatial plan (Rencana Tata Ruang Wilayah National/RTRW); drawings for the national spatial plan shall be prepared in scale of 1/1,000,000

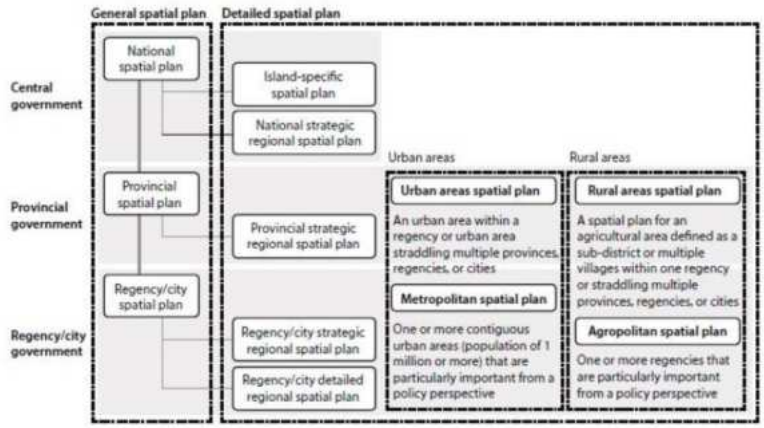
[1] Revised as Law 6/2023 regarding – Enactment of Government Regulation in Lieu of Law 2/2022 concerning Job Creation Law

(2) Provincial spatial plan (Rencana Tata Ruang Wilayah Propinsi/RTRWP); drawings for the provincial spatial plan shall be prepared with the minimum scale of 1/250,000
(3) District or city spatial plan (Rencana Tata Ruang Wilayah Kabupaten atau Kota (RTRWK); drawings of spatial plan are prepared with the minimum scale of 1/50,000 for district, and 1/25,000 for city,

The jurisdiction of provincial and district governments over the development of spatial planning is clearly stated in the Spatial Planning Law No. 26/2007. The authority to plan spatially is greater for district and provincial governments. The planning periods of national spatial plans (RTRW Nasional), provincial spatial plans (RTRW Propinsi) and district spatial plans (RTRW Kabupaten and RTRW Kota) are 20 years each.

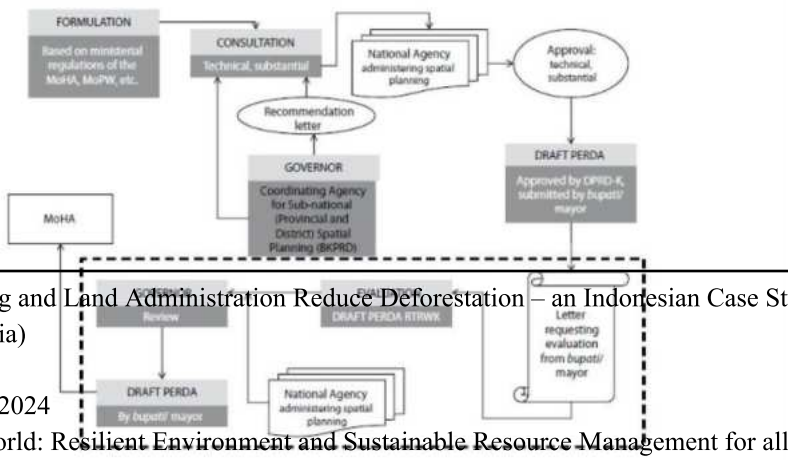
The process of spatial plan development for provincial and district governments is prepared locally with supervision from national government (ministries and national agencies); all data, maps and the content of spatial plans must be approved by national government; draft local regulation on spatial plan is legislated by local parliament; and the draft local regulation is reviewed and approved by national ministries before the draft passed as local regulations by local parliament. The process is hierarchical and intended to be integrated. The hierarchy comprises, in descending order, national, provincial, district spatial plans. Each spatial plan must be consistent with plans above it in the hierarchy.

Figure 2 shows the hierarchical nature of spatial planning across Indonesia's government levels, with general spatial plans at national, provincial and district/city levels supported by detailed strategic spatial plans and plans specific to urban and rural areas.



The process at district level can be seen in Figure 3 below, following MoHA Regulation No. 28/2008.

Figure 6: RTRWK (district spatial planning) policy formulation process. Source: MoHA Regulation No. 28/2008 on the Procedure for Evaluating District Spatial Planning (Gunawan, 2008)



Following the enactment of the Job Creation Law, Central government has the authority to pass regulations related to detailed spatial plans, provincial and district spatial plans if local parliaments and regional heads (Governors/District Heads/Mayors) fail to pass these plans in a timely fashion. This only governs the final step, passing the Plan after it has been developed by the region and approved by the central government. Central government cannot develop and pass regional spatial plans without regional governments developing and submitting drafts.

4.2. Key actors in Indonesian spatial planning

Key actors in the spatial planning process are shown below.

- **Ministry of Agrarian Affairs and Spatial Planning and National Land Agency** (*Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional* – **ATR/BPN**). The former has the authority to (a) formulate and issue national spatial planning, island spatial planning, national strategic area/ zone planning; and (b) to substantially approve provincial and district/ city spatial planning. The latter is a Non-Ministerial Government Institution tasked with carrying out government actions in the land sector nationally, regionally and sectorally as per legislation.
- At district/city level, **local governments** have authority to (a) administer/implement district/city spatial planning and district/city strategic area/zone planning; (b) issue permits and incentives for the use of space or land (e.g. location permits); (c) carry out land acquisition for development.
- **Ministry of Environment and Forestry (MoEF) (***Kementerian Lingkungan Hidup dan Kehutanan* –**KLHK)**, under Law No. 41/1999, is responsible for designating, managing and monitoring forest areas, and is required to provide 'substantive approval' for revised provincial spatial plans
- **Ministry of Home Affairs (MoHA) (***Kementerian Dalam Negeri* - **Kemendagri),** under Law No. 23/2014, has authority to (a) evaluate local regulation drafts (*ranperda)* on spatial plans (b) conduct consultations in the context of evaluating provincial/district/city spatial plans and (c) conduct general supervision and monitoring in the context of organizing spatial planning.
- **Ministry of Marine and Fishery** *(Kementerian Kelautan dan Perikanan* **– KKP),** since the integration of line marine and terrestrial plans under Job Creation Law 2020 and its derivatives, substantive approval on marine/coastal planning must be received from KKP prior to spatial plan finalisation. Ultimately, KKP has a similar authority to ATR/BPN, just on the coastal side, including: (a) formulate marine/coastal spatial plan as integral part of national spatial plan, national strategic area (KSN) spatial plan, Zoning Plan for Interregional Area (RZ KAW), and Zoning Plan for Certain Strategic Areas (RZ KSNT), (b) substantive approval of provincial coastal planning for provincial spatial planning, (c) implementation of suitability of marine spatial utilization activities (KKPRL), (d) control of marine spatial utilization and supervision
- **Coordinating Ministry of Economic Affairs (CMEA, or Kementerian Koordinator Bidang Perekonomian, often referred to as Kemenko)** coordinates technical ministries to synchronise policy formulation, development of economic strategic areas and control implementation.
- **Corruption Eradication Commission (or Komisi Pemberantasan Korupsi/KPK)** combats corruption within spatial and land use issues – especially over the last decade, KPK has been proactive in addressing corruption in forest and land issues that have strong connection with spatial planning compliance.

4.3. Challenges impacting spatial planning implementation and effectiveness

Despite a comprehensive legal framework, in practice experience suggests that the process of spatial plan development remains complex and many provincial and district governments face difficulties in both technical and non-technical aspects of spatial plan development. Many of the challenges previously identified (World Bank, 2012) remain:

- out of date and unenforced plans,
- unclear institutional responsibilities,
- poor regional coordination,
- limited technical and financial capacity within government,
- inter-district conflict over land-use designations,
- poor quality information, and
- inconsistencies between plans at different scales of government

These challenges are exacerbated in remote provinces, such as Papua and West Papua (now divided further into Central Papua, Highland Papua, Papua, South Papua, Southwest Papua and West Papua), where district and provincial capacity is even lower than average. A 2020 needs assessment undertaken by LEI and Daemeter determined the following provincial and district level challenges:

Challenges	**Impact**
• *Weak coordination between and among government agencies, NGOs and CSOs.*	• Activities supporting spatial plan development are incomplete, poorly designed and overlapping. • Spatial plans are less inclusive and less effective than ideal.
• *Limited standardisation and availability of customary territory maps.*	• Limited ability to integrate customary territory into spatial plans
• *Staff rotation and attrition within government agencies*	• Low retained capacity and poor knowledge management. Activities undertaken are unsustainable.
• *Low involvement and participation of community and indigenous peoples*	• Spatial plans are less inclusive, and indigenous peoples and local communities feel disconnected from the process.
• *Weak recognition and protection of indigenous peoples and customary land (in policy and in practice)*	• Increased land conflict within and between indigenous groups, local communities and government agencies.
• *Weak leadership in government agencies*	• Spatial planning processes are underfunded and deprioritised.
• *Ineffective green development implementation*	• Business enabling environment is not created • No support or drive for businesses to improve sustainability.

These challenges further impact data flows, with government staff poorly equipped and supported to understand:

- What data exists?
- What data is missing?
- What is the quality and coverage (ie: comprehensiveness) of available data?

- Where and how can data be sourced from?
- How can datasets be seamlessly shared/exchanged?
- How can data be quality assured/controlled?
- How to maintain sustainable data knowledge transfer

There is the clear need for increased capacity at local (e.g. district) and regional (e.g provincial) levels, and, as highlighted in the literature (e.g. Moeliono, 2011), the need to articulate how governments can best identify and take steps to implement 'public interest', rising above short-term economic interests to encompass longer-term social and/or environmental concerns.

Finally, one key outcome of poorly implemented spatial planning processes is deforestation. Large-scale, commercial land clearing has been the largest contributor to deforestation in Indonesia, with oil palm and timber plantations contributing to more than two-fifths of nationwide deforestation over 2001-2016, whilst conversion of forests to grasslands and small scale agriculture/plantations comprised an average of one-fifth each (CIFOR, 2019). Limiting deforestation requires policy and practical responses tailored to local and regional needs – including spatial planning measures that protect both forests and local population needs, as well as measures and staffing that enable land use monitoring and enforcement. Put simply – provincial and district governments need the tools to assess and prioritise where forest should be protected and conserved, and where forest should be productive, how local interests can best align with and benefit from (and hence support) defined spatial plans/land use, and how defined spatial plans/land use can be monitored and enforced.

5. KEY PROJECT SUCCESSES

With the context of spatial planning and key challenges identified in the preceding sections, this section identifies the key strategies and successes of the project, with the core purpose to identify replicable strategies for future implementation in Indonesia and abroad. These strategies have been grouped under the following key themes: localisation, partnerships, alignment, trust-building, flexibility, transparency and data accessibility, and training.

5.1. Localisation: Grow local capacity and promoting sustainability.

Localisation recognises the role of local ownership and leadership within the international development sector. For this project, it was essential that MoUs were maintained between the development partner (UK Government) and the relevant Ministry within the Government of Indonesia – in this case, the Ministry of Home Affairs. Likewise key agents and champions within government who promoted this project and its objectives were vital to success.

The LEI Daemeter team comprised over 90% Indonesian staff, including two members from Papua, with concentrated expertise in Indonesian spatial planning. Particularly valuable when working at district and provincial level, teams were able to build rapport and quickly gain a sound understanding of local needs. Similarly at national level, strong connections had already been made in many cases with key champions, and the team was able to be effective almost immediately from project commencement. Early and ongoing engagement with multiple and diverse stakeholders across government, Papuan indigenous communities, CSOs and NGOs was vital given the complex and politically sensitive nature of the project.

Above and beyond team composition, co-location of teams was a key strategy adopted to build local capacity and ensure the sustainability of spatial plans and capacity building initiatives. As a Technical Assistance Facility, the project had a central office located in Jakarta to support and coordinate at national level. However, given the focus of activities at district and provincial level, sub-offices were proposed in Jayapura and Manokwari. These ideally would have been co-located with local government offices, but this was not possible due to available space and the condition of local offices. Lockdowns as a result of the covid-19 pandemic then also impacted the viability of local offices – with work moving online where possible, however the locally based team was able to continue activities when safe to do so.

Above and beyond a successful project, a key success story of localisation in this context is that key Indonesian experts from the project continue to be engaged by district and provincial staff – as well as the development partner – to provide advice and support on processes that are continuing beyond the initial life of the project.

5.2. Partnerships: supercharge participation, consultation and training by ensuring all activities also build sustainable stakeholder connections and partnerships.

PSP commenced with a four-month 'needs assessment' phase during which rapid assessments and inception stage kick-off meetings were undertaken to identify and engage with key stakeholders and develop common understandings of relevant issues and challenges as well as alignment on programme goals and potential pathways. A multi-staged meeting approach was adopted: meeting with key stakeholder groups individually, then meeting multiple stakeholder groups together or including multiple stakeholder groups in events/trainings. So, for example:

- Spatial planning workshops were held for government officials and designed to improve and strengthen technical capacity at provincial and district levels. Universities and NGOs, alongside development and international partners, were brought into spatial planning workshops to build cross-stakeholder engagement, promoting inclusion and broader insight into needs and challenges, as well as post-project sustainability.
- Workshops were complemented by socialisations, which targeted a broad range of stakeholders including government representatives, NGOs and civil society organizations (CSOs). Socializations were designed to promote awareness and build mutual understanding of spatial planning processes, including:
    - sensitizing citizens to spatial planning products, and
    - improving community/public participation in spatial planning processes.
- Awareness raising, consensus building and training were linked as often as possible, drawing on lessons from past successful projects undertaken by LEI (such as the MCA-Indonesia Participatory Mapping and Planning projects). In this way, training was embedded in practice, and not simply partnerships but *relationships* were forged between sectors able to mutually reinforce and benefit from spatial planning.
- Facilitated policy dialogues further supported partnerships between national and provincial/district governments and were necessary given the need for understaffed provincial/district governments to remain abreast of evolving policy/technical aspects of spatial planning and to build rapport with national government actors, who have the authority to approve data, map and the content/substance of spatial plans.

It is essential to also understand that different stakeholder groups are further comprised of diverse stakeholder interests (ie: are themselves heterogeneous). So for example, different government agencies (MoHA, ATR/BPN, MoEF) as well as different levels of government (national, provincial, district) need support to connect and work together, as do different NGOs and different communities. This is the same lesson that is often repeated in contexts of gender and indigenous peoples – ie: that not all women will have the same lived experience, and agree, and there is a need to consult within that stakeholder group (and arrive at consensus/agreement, if that is the aim) as well as to promote and enable that stakeholder group's interests to be heard within the context of other groups and overarching processes.

5.3. Alignment: for sustainability, ensure project objectives align with diverse stakeholder objectives.

A key achievement of PSP was the safeguarding of over 3 million hectares of forest and land via 'sustainable development zoning'. This was enabled by a key innovation – the Sustainable Use Zone (*Kawasan Pemanfaatan Berkelanjutan*, KPB) – which was fundamentally possible because this zone aligned with existing regulations and stakeholder interests.

The Sustainable Use Zone (KPB) is a spatial planning mechanism that protects forest within cultivation areas whilst enabling the sustainable use of this forest by local people. This multi-use was essential to West Papua achieving its Manokwari Declaration objective to increase land protection to encompass 70% of the province – whilst also ensuring the recognition and enablement of indigenous peoples and local communities access needs to forest/land[2]. KPB, as a spatial planning tool, thus serves to prevent deforestation and GHG emissions, whilst recognising the rights of indigenous peoples and local communities.

This zoning innovation was able to be achieved because it was intentionally developed to align with (rather than contradict) existing ministerial priorities – such as the MoEF's social forestry plan and Provincial Forestry Plan (Rencana Kehutanan Tingkat Provinsi/RKTP). Similarly, whilst the Ministerial Regulation (Permen) MASP/NLA No. 14/2021 on Database Guideline for Spatial Plan does not specifically regulate the KPB designation, the team was able to demonstrate how KPB was essential as a strategic mechanism of realising West Papua's protected area aspiration. To convince MASP/NLA, MoEF and MoHA on the importance of KPB, PSP and the West Papua government produced a policy brief – documenting how KPB aligned with existing policy and expectations - and disseminated it and conducted a series of policy dialogues this innovation to national government agencies. Following consultations led by PSP, MASP/NLA agreed to integrate KPB into the existing Special Provision Area (SPA) category[3]. This regulation of KPB within SPA was incorporated within Local Government Regulation (*Perda)* No. 3/2022 and related technical material *(materi teknis).* This is a

[2] Papuan data suggests that over 70% of Papuan villages are located in forests.

[3] which covers water catchment areas *(kawasan resapan air)*, disaster prone areas *(kawasan rawan bencana),* water border areas *(kawasan sempadan air),* and sustainable food agricultural zones *(kawasan pertanian pangan berkelanjutan).*

significant achievement - to our knowledge, this is the very first time that such duality of use (protection and sustainable use) has been accommodated in Indonesia's spatial plan system, and it particularly supports indigenous peoples customary land recognition.

5.4. Trust-building: sustainable and equitable partnerships emerge with trust and mutual respect and understanding.

A critical achievement of the project was over 8 million hectares of adat territory integrated into approved spatial plans, facilitated by extensive adat community and NGO engagement and trust-building. This didn't mean that the team simply approached all customary groups and NGOs and simply asked for the data – rather, that adat communities in partnership with NGOs who had produced territory maps within the spatial plan areas, offered the data to the government, after extensive engagement, consultation and trust-building. Anticipating this outcome, PSP actively grew communication and relationships with Papuan CSOs from project commencement, as a foundation for generating interest and willingness to integrate customary (*adat)* data and information into spatial plans. As many local CSOs have supported local communities on participatory mapping, PSP was careful to adopt a cautious approach, recognizing existing efforts and seeking to ensure all that PSP efforts were seen as additional, complementary and useful, and not a threat to existing local stakeholders.

The above approach is particularly important given the political economy context of adat territory in Indonesia, with no previous recognition that adat territory should be integrated into spatial plans – and previously, no legal procedures providing for how to integrate customary territory into spatial plans. PSP worked closely with the West Papua government to produce a police brief evidencing the value and alignment of *adat* territory integration with national development planning processes and then President Jokowi's Papua policies. PSP conducted a series of policy dialogues (informal and formal meetings) with national government agencies to achieve consensus and awareness of this value.

Ultimately over 18,000 forest-dependent people had access to spatial planning consultations (in spite of pandemic impacts), with this access facilitated through a variety of mechanisms. In year 2 and 3 of the project, PSP facilitated many multi-stakeholder workshops and focus group discussions – across NGO, CSO, forest farmer groups, indigenous community, religious leaders, government, local parliament, media and academic actors - with the aim to listen to the thoughts and aspirations related to *adat* territories and the consequences of *adat* integration into provincial and district spatial plans. Activities were phased to gather momentum (e.g. FGDs preceded multi-stakeholder events, growing in size and scope), and were complemented by outreach via digital/electronic media including radio and newspaper. Stakeholder engagement directly and demonstrably led to changes made in spatial plans – and occurred because of baseline data collection and analysis that flagged a clear need to increase and strengthen CSOs knowledge on spatial planning. Extensive multi-stakeholder engagement and active participation in consultations provided meaningful input to the spatial plan and became essential key to produce good quality spatial plans.

Trust building is not only with non-state actors though, but also with government. Institutions need to be ready (both technically, and socio-politically) to receive, verify and process information such as adat maps. PSP's approach saw substantial datasets received by the respective agencies, with PSP then providing technical assistance on map standardization to ensure compliance with the Indonesian Geography Element Catalogue *(Katalog Unsur Geografi Indonesia/KUGI)* standard. Standardizing 100% of received *adat* territory maps enabled their direct integration into spatial plans.

Data integration was supported by broader PSP activities assisting preparatory spatial planning processes which extended across:

- coordinating with national and sub-national government agencies,
- facilitating public consultations,
- drafting local regulations with associated technical material and maps,
- supporting cross-sectoral meetings to obtain substance approvals, and
- supporting spatial plan enactment process.

PSP also actively supported provincial governments to conduct spatial utilization controls as mandated by spatial planning law. A particular achievement was successfully navigating the above via effective multi-stakeholder engagement processes in sometimes complex and politically sensitive situations, across online, offline and hybrid modalities in response to COVID-19. To further support government staff confidence and competence, the team developed eight policy briefs and papers and disseminated these along with multiple guidance documents and reports. Topics covered:

- *Sustainable Development Zone for the Sustainability of Papuan Forest and Indigenous People*
- *Integration of Spatial Plan (RTRW) into Regional Medium-Term Development Plan (RPJMD)*
- *Challenges of Integration of Marine and Coastal Spatial Plans into Spatial Plans*
- *Spatial Planning Preparation to Resolve Indicative Maps on Overlapping Geospatial Data (PITTI) as part of the Acceleration of One Map Policy*
- *Holding Zones*
- *Green Spatial Planning Tool*
- *Substance Approval Tool*
- *REDD+ Strategy and Action Plan of Papua Province*
- *Green Business Development reports for nutmeg and cocoa commodities in Fakfak and Jayapura*

5.5. Flexibility: Mechanisms that allow for flexibility are better able to reflect stakeholder wants and promote equitable partnerships.

Flexibility was a key strategy adopted by the programme, as a mechanism to promote trust through responsiveness and ownership through decision-making powers.

Several mechanisms were adopted to ensure flexibility to meet adjusting targets, capture knowledge and experience and adjust to emerging policy and spatial planning paradigms. At the governance and programme management level, a Technical Advisory Facility was established to provide short-term, quick turnaround review and inputs of technical material, whilst a Project Steering Committee provided overarching guidance and checks. At the

operational level, a Flexible Fund was established, drawing from LEI's extensive experience establishing, managing and monitoring such facilities for a range of donors. Opportunities presented by the Flexible Fund included addressing identified capacity needs, such as integration of adat land mapping, conflict resolution, training activities and flow on Training of Trainers to support district level government staff, and sporadic direct requests from district and provincial governments – where they met defined qualifying criteria. Clear operational guidelines were established around risk analysis and mitigation measures to ensure Value for Money and effective monitoring, evaluation and learning – so that all funds directly contributed to project objectives and long-term sustainability.

5.6. Transparency and data accessibility: empowering community access to information builds trust and improves capacity reach

For any digital project, transparency through available and accessible data is essential. The team grew available datasets from 171 datasets to 1,203 datasets, with all datasets checked for quality – covering completeness, consistency of projection, metadata and attributes. Two online portals – SIMTARU (https://simtaru.papua.go.id/) and KITORANG (https://kitorang.papuabaratprov.go.id/) were developed (one for each province). These portals built on existing work from past development partner funding - making over 65 spatial planning documents available. They particularly enable government management of data and government and public access to data, including via a mobile app. This app was further developed to enable monitoring of land compliance by government and communities, with uptake leading to 50 possible infractions reported.

5.7. Training: effective training requires the implementation of learning in the job context.

Given the challenges of spatial planning at district and provincial level in Indonesia – and the Papuan provinces especially – capacity development, training and multi-way knowledge transfer were dominant streams of work within PSP. In lower-technology contexts, such as in Papua, creating an environment of capacity building co-ownership can be important – where it is appreciated that knowledge flows in multiple directions (not just one way) and that all stakeholders have roles and responsibilities in addressing the capacity building challenge and in developing contextually-appropriate training modalities. Actions undertaken included pairing coaches/mentors with core staff, facilitating training of trainers, on-the-job-training, roleplaying, regular team building and reflection sessions, and review/adjustment to training modules to remain relevant to participant needs. Importantly, our experience is that most training happens when learning is implemented in the job context. Reflection is an important part of training – across LEI projects we seek to intentionally facilitate routine reflection workshops, which allow participants the time and space to reflect post-training. Our teams were supported to establish 'GIS Forums' online and through messaging apps that then became self-sustaining as a user resource to seek help and learn from others' experience. Exploring lessons and ways to do better are essential parts of the learning cycle, and it is important to provide platforms and activities in which allow time to explore and share reflections and lessons.

Sustainability was supported through establishment of sound geospatial data management practices, with trained staff representing their respective agencies and undertaking responsibility as data guardians as well as ensuring budget support for continued capacity development. Training was also extended beyond government to community-based organisations, civil society, universities and professional associations. This was a sustainability strategy, with the expectation that better trained and informed communities can better participate in and support spatial plan development and enforcement – and by involving academia, the universities can support training into the future.

A summary of the approach to training and capacity development is as follows:

- **Embedded:** Locally embedded with participatory design (and improvement) processes; and nationally embedded within a long-term government vision helps to unite trainees behind a cause.
- **Multi-modal**, encompassing workshops, on-the-job training, one-to-one and one-to-many coaching/mentoring, roleplaying, etc. LEI has experienced success in training modalities that spend only 30% of time in 'the classroom', but up to 70% of time in 'on-the-job-training' and otherwise implementing training topics.
- **Iterative and scalable:** utilizing successful implementers from Scheme 1 to train staff in later Schemes and embedding peer-to-peer training at the national level.
- **Reflective**: training is most effective when there is time for individual and group reflection – bringing participants back together to share lessons, workarounds, challenges, and adaptations.
- **Well-documented** for sustainability.

6. CONCLUSION

In general, there has been insufficient discussion and debate about alternative approaches to spatial planning for developing countries (Todes et al., 2010). Whilst an increasing number of papers continue to add to the theory of planning[4], these consistently fail to provide adequate direction to jurisdictions seeking to implement 'good practice planning' (Metzger et al., 2017). Similarly, there is only limited documentation of in-practice challenges of implementing spatial planning, and, in addition to a comprehensive overview of the Indonesian spatial planning system, this paper contributes a series of 'good practice' steps, under the themes of localisation, partnerships, alignment, trust-building, flexibility, transparency and data accessibility, and training.

As a country that has strong commitment to reduce emissions from deforestation, Indonesia's spatial plan is an effective tool to protect its rainforest and reduce deforestation – and Indonesia's spatial planning framework and practice sets an excellent example for other countries in similar situations. Spatial plans provide certainty concerning which areas will be allocated for development and which forest should be protected and conserved. Importantly, spatial plans can support certainty for citizens, especially in less-formal tenure contexts.

[4] For example, Albrechts (2015) calls for new institutional arenas - to encompass values and visioning, inclusiveness and accountability.

7. REFERENCES

Albrechts, L. (2004). Strategic (spatial) planning reexamined. *Environment and Planning B: Planning and Design*, *31*, 743–758. https://doi.org/10.1068/b3065

Albrechts, L. (2015). Ingredients for a more radical strategic spatial planning. *Environment and Planning B: Planning and Design*, *42*(3), 510–525. https://doi.org/10.1068/b130104p

Allmendinger, P., & Haughton, G. (2012). Post-political spatial planning in England: a crisis of consensus? *Transactions of the Institute of British Geographers*, *37*(1), 89–103.

Amin, A., & Thrift, N. (2002). *Cities : reimagining the urban*. Polity.

Bedner, A. (2016). Indonesian land law: integration at last? And for whom? In J. F. McCarthy & K. Robinson (Eds.), *Land and Development in Indonesia* (pp. 63–88). Institute of Southeast Asian Studies - Yushof Ishak Institute. Retrieved from https://muse.jhu.edu/book/47833

Ellin, N. (2006). *Integral urbanism*. Taylor & Francis.

Gleeson, B., & Low, N. (2000). *Australian urban planning: New challenges, new agendas*. Allen & Unwin.

Hudalah, D., & Woltjer, J. (2007). Spatial Planning System in Transitional Indonesia. *International Planning Studies*, *12*(3), 291–303. https://doi.org/10.1080/13563470701640176

Metzger, J., Soneryd, L., & Hallström, K. T. (2017). "Power" is that which remains to be explained: Dispelling the ominous dark matter of critical planning studies. *Planning Theory*, *16*(2), 203–222. https://doi.org/10.1177/1473095215622502

Moeliono, T. P. (2011). *Spatial Management in Indonesia: From Planning to Implementation Cases from West Java and Bandung*. Universiteit Leiden. Retrieved from https://openaccess.leidenuniv.nl/bitstream/handle/1887/18242/Proefschrift Tristam Moeliono 21 november 2011.pdf?sequence=1

Monkkonen, P. (2013). Urban land-use regulations and housing markets in developing countries: Evidence from Indonesia on the importance of enforcement. *Land Use Policy*, *34*, 255–264. https://doi.org/10.1016/j.landusepol.2013.03.015

Olesen, K. (2014). The neoliberalisation of strategic spatial planning. *Planning Theory*, *13*(3), 288–303. https://doi.org/10.1177/1473095213499340

Pettersson, F., & Frisk, H. (2016). Soft space regional planning as an approach for integrated transport and land-use planning in Sweden – challenges and ways forward. *Urban, Planning and Transport Research*, *4*(1), 64–82. https://doi.org/10.1080/21650020.2016.1156020

Rahmawati, Y. D. (2014). Self-Organization, Urban Transformation and Spatial Planning in Greater Jakarta, Indonesia. *Jurnal Perencanaan Wilayah Dan Kota*, *25*(3), 174–191. https://doi.org/10.5614/jpwk.2015.25.3.1

Rukmana, D. (2015). The Change and Transformation of Indonesian Spatial Planning after Suharto's New Order Regime: The Case of the Jakarta Metropolitan Area. *International Planning Studies* , *20*(4), 350–370. https://doi.org/10.1080/13563475.2015.1008723

Shaw, D., & Lord, A. (2007). The cultural turn? Culture change and what it means for spatial planning in England. *Planning Practice & Research*, *22*(1), 63–78. https://doi.org/10.1080/02697450601173538

Todes, A., Karam, A., Klug, N., & Malaza, N. (2010). Beyond master planning? New approaches to spatial planning in Ekurhuleni, South Africa. *Habitat International* , *34*, 414–420. https://doi.org/10.1016/j.habitatint.2009.11.012

UN-Habitat. (2016). *World Cities Report 2016 - Urbanization and Development: Emerging Futures*. Retrieved from http://wcr.unhabitat.org/main-report/

World Bank. (2012). *Indonesia: The Rise of Metropolitan Regions. Towards Inclusive and Sustainable Regional Development*. Washington D.C.: urbanisation report publicshed by the World Bank.

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