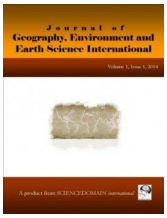

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Why are Narratives that Place the Blame for Deforestation on the Rural Poor so Pervasive and so Persistent?

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ABSTRACT

Deforestation is a prominent issue in the call for global environmental sustainability whose status transcends the realm of environmental studies and extends to the broader domains of public policy and popular concern. Deforestation issues are complex, and narratives provide the simple explanations needed by policymakers and the public. One of the most common narratives explaining deforestation places the blame on the rural poor. These narratives make facile connections between the poor who depend on the forests for their livelihood and the environmental degradation which is taking place in their immediate vicinity. They unite two major problems in a neat hermeneutic circle: the rural poor are caught in a vicious cycle of poverty and environmental degradation, where they are both the victims and the perpetrators. While rural poverty and deforestation are closely connected, the relationship is a complex one - contrary to what such simple narratives lead us to believe - and the causes of deforestation remain unclear. This article discusses the causes that explain why are narratives that place the blame for deforestation on the rural poor so pervasive and so persistent?

Keywords: Poverty; deforestation; environmental degradation; downward spiral; sustainability.

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1. INTRODUCTION

Deforestation is a prominent issue in the call for global environmental sustainability whose status transcends the realm of environmental studies and extends to the broader domains of public policy and popular concern [1]. Deforestation issues are complex, and narratives provide the simple explanations needed by policymakers and the public [2]. One of the most common narratives explaining deforestation places the blame on the rural poor [see 3,4,5,6,7,8]. These narratives make facile connections between the poor who depend on the forests for their livelihood and the environmental degradation which is taking place in their immediate vicinity [1; 9; 10; 11; 12; 13; 14; ; 15; 16; 17; 18; 19; 20]. They unite two major problems in a neat hermeneutic circle: the rural poor are caught in a vicious cycle of poverty and environmental degradation, where they are both the victims and the perpetrators [21; 22; 23]. While rural poverty and deforestation are closely connected, the relationship is a complex one - contrary to what such simple narratives lead us to believe - and the causes of deforestation remain unclear [24,25].

Nonetheless, narratives that reinforce and perpetuate the connection between deforestation and rural poverty continue to exist [11,26,27,28]. They are an important concern because they influence policy prescriptions and legislation [29]. What are the reasons for their pervasiveness and persistence? Narratives are pervasive because they simplify complexities, are easy to communicate and have popular appeal. They are persistent because they are a useful political and policymaking tool, produced by underlying discourses of power and used by the powerful [30]. Once in place, they are difficult to dispel [2]. In short, deforestation narratives that blame the rural poor are pervasive and persistent because their features abet their use by those in power: they are maintained and perpetuated by the powerful against the powerless.

To understand the nature of deforestation narratives that blame the rural poor it is fruitful to examine the processes, actors and constructs that underlie them. This essay will begin by defining and contextualizing deforestation narratives. It will then look at some of the complex discourses behind these narratives and identify how different actors, histories, socio-economic and cultural factors are involved in framing and producing these narratives. Through this examination, features that explain why narratives that blame the rural poor for deforestation are both pervasive and persistent will be highlighted. This paper will then conclude by discussing the implications of narratives that blame the rural poor for deforestation (hereafter referred to as 'deforestation narratives').

2. LINKAGES BETWEEN LAND, FOREST AND POVERTY

Deforestation narratives are but one kind of story in the long existence of land degradation narratives [31]. Three common themes can be identified in land degradation narratives that blame the poor: (1) they are neo-Malthusian, (2) they see the poor as technologically backward and ignorant, and (3) their livelihood practices as environmentally unsustainable [7,8,19,20,26,27, 32,33,34,35].

Deforestation narratives are simplified stories that 'describe problems, identify and label their perpetrators, and justify proposed solutions' [30, p.7]. Thus the rural poor are identified as perpetrators of deforestation as they live nearest to the forest, and depend on its products and land for their livelihood [11,14,36]. In pre-industrial Europe these were peasants, in China today they are ethnic minorities, in West Africa they are tribal villagers. While 'the rural poor' are actually diverse down to the individual, narratives homogenise a category out of a heterogeneous reality. As will be shown, what the 'rural poor' have in common is that they are marginalised, have little voice and political presence, and they are the ones at the end of a long chain who lose out to more powerful actors on land issues [30]. Even groundbreaking studies such as Fairhead and Leach's [30] in Kissidougou – which showed that the villagers living in island forests have not in fact degraded, but are reforesting the forest-savannah landscape in which they live – do little to dispel the popular narrative that blames deforestation on the poor.

In-depth studies such as this do, however, continue to challenge the perception that it is the rural poor who deforest [also see 7,8,27,32,36,37]. In places where shifting cultivation is practised, it has been shown that it is not necessarily a land-degrading practice, and often the people who have lived on the land for generations know how to care for it better than the central government. Ganjanapan [36] relates the case of the Karen people in Thailand whose traditional beliefs and practices protected the

watershed, yet they were blamed for deforestation due to ethnic prejudice and official thinking 'based mainly on a set of myths about villagers' land and forest management which government officials have themselves created' [36, p.215].

Among the theorists who are critical of an overly simplistic generalizations that find poverty to propel deforestation, [10,11,14,27,32,38] Nunan et al. [36] and Tajul and Subramaniam 2019 [39], offers three other possible relationships between poverty and the deforestation [also see 7]. The similar relationship between poverty and deforestation also supported by many other researchers and international research and development institutes [for e.g. for e.g. 10; 40; 41; 42; 43; 44; 45; 46; 47. 48; 49; 50; 51; 52; 53; 54; 55; 56; 57; 58; 59; 60; 61; 62; 63; 64; 65; 66; 67] as well. Through analyzing the above mentioned researcher's postulations about these possible relationships between the poverty and deforestation, I will argue that the poverty-deforestation relationship is highly complex and varied, alluding any straightforward generalizations about cause and effect. In particular, I will contend that attention to local dynamics and human's interaction with particular resources, such as land, forest and water, support the claim that multiple factors, including institutional and market failures, further mediate the poverty-environment nexus. Instead of poor being the primary actors leading to increased deforestation, one counter approach suggests that other factors particularly power, greed and wealth, are responsible for deforestation in poor countries [7]. For example, some researcher such as Peprah P, 2017 [32]; Olinto P, 2013 [38], Nunan, 2002 [36]; Ahmed, 2014 [68]; Duraiappah (1998) [27], Boyce 1994 [67]; describes this approach as one that views the exploitative practices of the rich as the primary factor forcing segments of the population into poverty, and in turn exacerbating deforestation [7]. This view both substantiates and complicates the theory that poor and poverty fuels deforestation, as it finds the key factors responsible for deforestation to be greed, power, greed and wealth, even as these dynamics themselves fuel the forms of poverty that jeopardize ecosystem sustainability.

Citing the examples from poor countries on poverty-deforestation relationship Leach and Mearns (1995) [69], Reardon, Thomas and Stephen Vosti (1995) [70] and Myers and Kent (1995) [71] discusses how "downward spiral" is difficult to break in rural areas and how it affects the poverty-deforestation relations negatively with specific focus on market and institutional failure (Rai, 2019). Following the study of Leach and Mearns (1995) [69], Reardon, Thomas & Stephen Vosti (1995) [70] and Myers & Kent (1995) [71] Duraiappah [26; 27] postulates a second possible relationship, which highlights the links between institutional failure and markets' dynamics with deforestation [also see 7; 27]. Specifically, institutional and/or market failures are hypothesized as the primary instigators of environmental degradation [27]. Here, understanding a clear distinction between market and institutional failure is very necessary when policy implications and instructions and regulations are addressed, as specific types of failures require unique prescriptions [27; 7]. In most of the conditions institutional failure is considered to delineate both mechanisms. In many cases the distinction between market and institutional failure is not always clear but it should be made very clear if policy analysis and prescriptions are primary objectives [27,7].

The third and final possible relationship that questions the conventional view is the conviction that deforestation is a key factor responsible for poverty. Mink, S (1993) [72]; Perrings, C. (1989) [73] Boyce (1994) [67] , Baland, Jean-Marie & Jean-Philippe Platteau (1996) [74]; Broad R. (1994) [75], are the supportive of this view and later Duraiappah (1998) [27] on the basis of their work discussed this third relationship in detail. According to this approach, if deforestation is caused by only exogenous poverty (or when other factors are responsible for poverty than the degradation of the environment) then the "poverty-induced deforestation" [5; 6; 76; 77] argument could be accepted and that would be ideal from the policy maker's perspective to carry forward and follow the idea of environmental protection through poverty alleviation policies [27, page 2171]. However, if poverty is endogenous, or itself caused by deforestation, then a feedback loop is possible, where more deforestation leads to further endogenous poverty. In the end, this theorization supports the "downward spiral" view [68; 78], demonstrating how deforestation reinforces each other.

Although the majority of the literature that we discussed here in the above paragraphs show marginal groups adopting deforestation activities, very few freely chose these activities and many had left with no choices but to adopt

unsustainable practices of deforestation [27]. Economic conditions and increased vulnerabilities with regard to markets and institutions as well as the environment, often caused by the activities of elite and powerful section of the society, left marginal groups with very few other alternatives other than to adopt resource mining activities [27]. Thus, the possible link from poverty to deforestation is not so well established as the link from deforestation to poverty. From the above discussion, the poor can not blamed as the main culprit behind deforestation. Rather, the poor in many cases are more aware about local land, forest, and water resources, as their lives and livelihoods are often more entangled and dependent on these resources. In fact, Broad,1994 (75) discussed, in some cases the poor are mobilizing to protest the high costs of deforestation that they are experiencing [3].

As many scholars illustrates, distinguishing the root causes and effect of the poverty-deforestation relationship is critical for creating effective policy. For instance, the policies that are focused on eliminating endogenous poverty will have limited impact if the key forces causing deforestation are still present [27]. In other instances, if deforestation is caused by only power, wealth and greed then the policy measure may be intricate by rent-seeking activities by those who are wealthy and powerful [27]. Thus, vested interests have the potential of preventing the adoption of these solutions [27, page 2171]. A lack of discernment of the root causes and connections between defore-station and poverty could be one of the reasons why most policies adderssing the relation between deforestation and poverty issue had limited success [27, page 2172].

Box 1. Poor are in a unique position to conserve the natural resources

Many scholars [for e.g. Duraiappah (1998) [27], Scherr (2000) [79]; Forsyth et al (1998) [41]; Reardon and Vosti (1995) [70]; Cavendish (1999**)** [22] indicate that economically disadvantaged populations often are in a very different and unique position to conserve resources, and often act to do so when institutional and market failures are absent. Research demonstrates the ways the poor are uniquely positioned to be stewards of the environment, and often act to preserve the environmental resources for which they depend on for sustenance and their livelihoods, sometimes even reviving degraded resources. For example, studies [80; 35; 81; 82; 83; 84; 85] have found a wide range of environmental outcomes under management by the poor and of welfare outcomes following environmental degradation. Researchers [86; 87; 88; 89] reveal that poor farmers adopt resource-conserving practices nearly always because these also contribute to increased productivity or output stability and are economically viable in the farmers' context of risk and resource constraints [79]. Such dual-purpose technologies are essential to achieve poverty reduction and environmental policy objectives [79, page 486]. Reardon and Vosti's (1995) [108] concept of 'conservation investment poverty' highlights poor people's limited capacity to mobilise critical cash, labour, machinery or other resources, even for highly profitable and effective investments. This is partly because of weak institutional development and poor functioning of factor markets in many poor rural areas [79].

A result of this new evidence of variability in poverty–environment interactions has been an emerging focus on "sustainable rural livelihoods" [79 page, 481]. Examinations of livelihood strategies [for e.g. 89; 90; 91; 92] have revealed that although the rural poor may have limited resources, they still have considerable capacity to adapt to environmental degradation, either by mitigating its effects on their livelihoods or by rehabilitating degraded resources [79, page 482]. A wide variety of coping mechanisms may be used to deal with environmental stress [79, page 482]. Some of these responses imply further impoverishment (e.g. reducing consumption, depleting household, or moving),others may offset the welfare effects of resource degradation without improving the natural resource base (e.g. increasing off-farm employment, exploiting common property resources) [79]. Some strategies both improve natural resources and reduce household poverty by protecting and preserving the asset base, diversifying and improving on-farm production systems, or taking out credit to invest in future production or resource protection [78; 79].

Source: [7].

As we have already discussed when land becomes deforested, it may be 'the rural poor' who do the clearance – but they are seldom the real drivers of such actions [26; 27; 32;90; 91; 92; 93; 94]. Nonetheless, narratives retain 'general explanatory or descriptive power even after...the specific conventional wisdoms on which they are based are understood to be subject to serious qualification' [2, p. 288]. So what then is a narrative's relation to truth? This paper interprets narrative to be a representation of 'truth' insofar as truth is seen as 'a thing of this world... Each society has its regime of truth, its general politics of truth: that is, the types of discourse that it accepts and makes function as true' [95, p.131]. Interpreted as representations of truth, narratives can be seen as products of Foucault's 'discursive formations' or discourses. Post-structuralist modes of analysis such as political ecology, grounded in relativist and constructivist thinking [96], are a fruitful way to investigate the underlying processes, ideologies and constructs found in discourse. This essay now turns to look at some of these factors in order to explain why deforestation narratives that blame the rural poor are so pervasive and persistent.

3. WHY DEFORESTATION NARRATIVES THAT BLAME THE RURAL POOR ARE SO PERVASIVE AND PERSISTENT?

Narratives are pervasive because they often play on people's preconceptions and prejudices. In the case of national media in China, the Theory of Himalayan Environmental Degradation (THED) narrative is used as propaganda against minority ethnic groups. It strengthens what Blaikie and Muldavin [29] identify as discursive weapons of the state. The role of the media in spreading narratives is tremendous, and has been exploited by both government and conservation non-governmental organisations (NGOs) to garner support [97]. It has at times also been effectively used by the marginalised such as the Kayapo in the Amazon to spread counter-narratives, publicise their cause and gain international support [98].

Narratives are persistent because they are hard to get rid of. One reason Roe (1991) [2] gives for this is that they are universally applicable, yet have to be disproved on a case-by-case basis by new science, which often does not reduce the ambiguity for policymakers, as discussed above. Another reason narratives are so persistent is that they are products of underlying discourses of power whose structures remain the same, stacked against the poor who must depend on the forest for their livelihood. This can be seen in how both in Guinée and Madagascar, the transition from colonial to state government was not accompanied by change in forest politics from the point of the rural poor [97; 98; 99].

Deforestation narratives persist because the rural poor who are able to refute them, are not in a position of power to do so. Perceptions of what deforestation means or what constitutes it are culturally specific. While the colonial administrators in Madagascar saw tavy (shifting cultivation) as 'irrational', potentially tax-evasive and inconvenient for their administration, to the Malagasy it was 'culturally and materially the most significant' [99, p.157] work that confirmed their social identity and cosmology. When perceptions of what deforestation is differ and one definition is imposed, it is a political act of domination. Western perceptions of deforestation are now under question as new studies reveal that erstwhile 'primeval' jungles are in fact secondary growth, and show patterns of past human disturbance [100; 101]. New ecological models and palaeo-archaeological research at larger historical time scales emphasise forest resilience and question assumptions of irreversible crises that underlie deforestation narratives. However, deforestation narratives also persist because scientists who are able to refute them do so to a limited audience. This is not to say that deforestation is not a global problem, but that deforestation narratives (as will be seen below) can also be viewed as expressions of 'eco-anxiety', which also explains their persistence and pervasiveness.

Narratives persist because they have a place in the human psyche. The myth of unspoiled Edenic wilderness is a force in the western psyche [101; 102] and conservation organisations regularly tap into this through their fundraising campaigns to prevent deforestation and to save 'pristine wildernesses'. In the case of human anxieties, narratives can also be said to be pervasive. Western fears of tropical deforestation and climate change have been recurrent over the past centuries. Records of concern over deforestation effects date from after 1300 in the Canaries and Madeira, and the fear of human extinction from climate change was raised as early as 1858 [101]. Narratives harness on to these collective fears and give them an outlet [102].

Another human anxiety such narratives draw on is the Malthusian view of population pressure exceeding environmental carrying capacity, leading to the 'collapse' of civilisation. The Easter Island narrative in *Collapse: How Societies Choose to Fail or Succeed* [103] is a classic example of the lure that narratives hold. While global overpopulation is a valid concern, the effect of population growth and density on deforestation remains unclear: studies are to be found that both support and disprove this claim, and the direction of causality between population growth and deforestation or afforestation has yet to be established [104].

Deforestation narratives persist because they are 'an integral facet of policymaking' [30] - a useful political and policymaking tool. Governments are the main actors in deforestation issues, and can have direct influence through forest clearance, or indirectly, through social and economic policies [93]. Blaikie and Muldavin [29] compellingly illustrate how governments use narratives to further their own aims, by examining how the Indian and Chinese governments continue to support the Theory of Himalayan Environmental Degradation (THED), 'one of the first grand environmental narratives to be comprehensively interrogated and, in large part, rejected' [29, p.522] in their domestic policy agendas. The THED narrative has all the essential drivers of a deforestation narrative: Neo-Malthusian population growth, backward agricultural practices and deforestation from fuel wood collection and clearing for agriculture. The narrative persists because it is perpetuated by the government to justify policies that restrict peoples' access to natural resources (such as forest policy or gazetting national parks), dam construction, or to relocate people.

Those that are in power are able to maintain their authority through the science/policy interface, where knowledge produced perpetuates the narratives and maintains the status quo. The notion of a positivist science feeding into policy along a rational policymaking model has been called 'naïve' by Blaikie, who suggests a more realistic 'discursive process model'. This model accommodates the power and effect of deforestation narratives. In examining how governments create, propagate and use narratives to consolidate power, Blaikie and Muldavin [29] also examine how science and policy are cause, process and result of such narratives, and how science itself is socially constructed knowledge. Roe [2] explains why this may be so when he pointout that new information often brings about more ambiguities and uncertainties in relation to the simple narrative the policymaker was comfortable with, often without offering better options for action, so the attachment to the possibly incorrect but known view is in fact heightened. Policymakers also use narratives to justify their decisions, even when they have been proved erroneous, because there is much at stake behind the decision-making process – for instance, the existence of certain government ministries (such as for land registration in Kenya) relies on the perpetuation of a narrative [2].

4. LINKAGES BETWEEN FOREST POLICY AND POWER POLITICS

Looking at the history of deforestation narratives raises the question of when did the implication of the rural poor in deforestation arise? As mentioned above, forest issues are tied to those of land control and power. The Norman conquerors in England were 'the first who consistently linked forest policy and power politics'. However, they did not blame the poor for deforestation. The use of the deforestation narrative as a political tool seems to have arisen by the 16th century in German and French forest policy, when it was necessary to justify that princely decrees were for the common good, and wood shortage was invoked [31, p.138]. When Grove writes about the colonial concern over deforestation, it is with reference to the deforestation practices of the colonial capitalist venture, and not to the rural poor. He notes from the minutes of a meeting at the Royal Geographical Society (London, March 1865) that with regard to Indian deforestation, a Colonel George Balfour contributed that 'Rainfall decline in India...was caused principally by the deforestation activities of the whole community, including European plantation owners' [101, p.13]. In Madagascar, Jarosz [99] observes that blame was not put on the rural poor until after World War II. As can be seen, the poor became implicated at different times in different places.

Deforestation narratives are persistent and pervasive because they are useful and compelling. When a narrative becomes a 'discursive pawn in “games of the state” [29, p.520] it is held on to as long as it is useful and expedient to achieving the state's aims, and not discarded simply because it has been shown to be scientifically dubious, as shown in the case of how Indian and Chinese governments have

adhered to THED. Along the same lines, deforestation narratives persist because they continue to be a rallying cry for international NGOs in the fight to save biodiversity.

Forest policy by ruling powers from colonial government to national government to international governance can be seen as part of what some scholars calls a legibilitization process. This is process in which forest borders are delimited, common management is taken away from the people, state control is exercised, and forest land is zoned and protected for various uses. Whether these uses are for forestry or for conservation, the result is still the same, in that local people's rights and access are limited, and they are marginalised. Even in participatory approaches today, many of the poor remain disempowered in that the management methods are still imposed by central authority [30]. Ribot et al. explore case studies of forestry management decentralisation in Bolivia and Nicaragua, where ultimately the power remains with central government, and logging concessionaires are favoured over the rural people, who were then blamed for bad management [105]. It is a recurring scenario.

Deforestation narratives persist because they garner international support and funding for developing countries and for conservation organizations [7; 8]. The Convention on Biological Diversity (CBD) in Rio in 1992 brought deforestation to global prominence. It was conceived in response to northern NGOs' concern over tropical deforestation (but was superseded by the issue of bioprospecting) [98]. As neoliberalism grew so did the power and reach of multilaterals in the international arena. The sustainable development discourse introduced by the Brundtland Commission enabled a dual environment-development agenda, and many development agencies such as the World Bank took on environmental prerogatives [94; 19; 20; 106]. With their funding packages came environmental conditions [107]. One way these played out at the administrative level in Guinée was that government officials responded by declaring needs in keeping with the narratives that pulled funding, rather than actual needs, thereby using and perpetuating the narratives.

Socio-economic factors underlie narratives that blame deforestation on the rural poor. Fairhead and Leach (1996) [30] relate how during colonial rule in Guinée and Kissidougou, villagers were (wrongly) blamed for threatening the natural resources (such as wild rubber trees - on which 'the colonial economy was heavily dependent') through their livelihood practices which were perceived to cause land degradation. In more recent years foreign loan packages, and the 'greening of aid' (ibid.) meant that 'presenting a degrading or threatened environment has become an imperative to gain access to donors' funds'. And so the deforestation narrative was perpetuated by urban and educated officials who viewed the villagers as backward and incapable managers, and perpetuated this view by blaming them in order to access donor funding [30, p.267-268].

The role of international conservation NGOs in perpetuating the deforestation narrative is significant, in keeping with the growing power of conservation science and conservation NGOs [108]. In the past decades conservation organisations have done more than any global body to raise international awareness on tropical deforestation. It is a testament to this success that most people believe that the rainforest is the most threatened by deforestation, when other types of tropical forest actually experience more deforestation [104], but are less a cause célèbre. This is because the aim of conservation organisations is to save biodiversity, and rainforests are recognised to contain the greatest amount of biodiversity [93]. The urgency to prevent rainforest deforestation is then not the save the forests per se, but to save the habitat of the species they contain. Fairhead and Leach coined the term 'Tropical Forest International' [30] to describe the internationalisation of tropical forests through the vortex of knowledge production and funding by international conservation organisations, who work top down with national governments, leading also to accusations of 'eco-imperialism'. The classic method of conservation is the protected area, which separates people from 'nature' and has traditionally blamed the poor for degrading wilderness and criminalise customary practices [109]. Deforestation narratives are thus perpetuated in order to justify the policy of exclusion.

5. CONCLUSION

There is much contention about the poverty-deforestation link, postulated by two differing general approaches. The first postulates that poverty is a key factor behind deforestation, particularly in developing countries [26; 27 page

2170; also see 10; 16; 17; 18; 19; 20; 38; 47; 48; 49; 50].

This predominate approach argues that in order for policy makers to address deforestation issues, they must first analyse and give priority to tackle the poverty issues [27] and is evidenced in the World development Report (World Bank 1992) [15], Bruntland Report 1987 [94], and also discussed more carefully in Perrings (1989) [73] and Baland and Platteau (1996) [74] [7].

A second broad school of thought argues, through a variety of differing theories and postulations that the generalisation of poverty-deforestation direct link is too simple and the nexus between them is governed by a complex web of factors [for e.g. 26; 27; 30; 74; 75]. For example, a body of economic literature [33; 34; 42; 43; 78; 86; 91; 111; 112; 113; 114; 115; 116; 117] disputes the conventional theory by asserting that this simple generalisation of multifaceted problem is fallacious [see 69] and miss many other complex factors such as institutional, cultural and demographic that come into play in the connection between environment and poverty [27, page 2169] [7] . A complicated link of these factors in addition to feedback loops between poverty and environmental degradation [87] make the process of identifying causality links between this poverty and deforestation nexus a non-trivial exercise [27, page 2169].

Different case studies (for example of land, forest and water), examined by many scholars, that we discussed in this paper show that power, greed, market failure and institutional failure are the major factors behind deforestation , not poor people themselves, while deforestation negatively impacts poor groups. Studies [for e.g. 64; 84; 85; 117; 118; 119; 120; 121; 122; 123; 124; 125; 126; 127; 128; 129; 130; 131; 132; 133; 134; 135; 136] also show that poor people often have a high level of awareness about the forest (and environment), and are in a position to protect the environment, as a sustainable environment will support their livelihoods. Hence, we can say that the ‘poverty causes deforestation’ argument is vastly insufficient for understanding the nature of these processes [7]. Many policies will not be effective if they overlook the root causes and only see one direct link between deforestation and poverty, ignoring other contributing factors and feedback loops [7].

In addition, critiques of theorizations of a “downward spiral” [24; 68; 87] are furthered by research [94; 22; 24] that suggests marginalized section of rural areas is able to adopt protective mechanism through collective action that minimizes the negative outcomes of deforestation-led-environmental change [41; 7]. Such research indicates that some recent ideas related to deforestation are based upon misguided linkages of human activity on deforestation-led-environmental change [97] in effect bypassing many of the most pressing environmental problems that currently affect poor people [41].To achieve the goal of poverty reduction and environmental protection there is the urgent need to deeply understand the critical link of deforestation and poverty and at the same time authorize policy options to eliminate these two major problems [7].

Narratives that blame deforestation on the rural poor are pervasive and persistent because their subjects – deforestation and poverty, constitute a story that is known and enacted worldwide. They appear logical and are easy to believe, and they spread easily, like good stories. This paper has tried to touch on the similarities of these narratives in different places. It has attempted to show how deforestation narratives are based on basic assumptions or inherited knowledge that can be false, but which are nonetheless reinforced through science and policy. It suggests that this is because they are used by powerful actors such as government or international organisations, who can control the production of science and policy. Through this science/policy discourse the actors perpetuate a cycle of power for themselves and of poverty for the rural poor who are blamed for deforestation. As products of underlying discourses, deforestation narratives embody power relationships and the status quo, and are culturally entrenched. They exist in western cultural belief and imagination, which has been a force behind international conservation organisations and multilateral institutions. Deforestation narratives are lived in the tropical countries where 'continuing conflict serves to further the persistence of received wisdoms, for in conflicts they are both hardened and constantly tested (and thus adapted and improved)' [137, p.268].

It is generally agreed that policy failure is the root cause of deforestation, and that good governance is a prerequisite for policy corrections [138]. Unfortunately, in many countries where there is deforestation, government is corrupt and illegal logging is

rampant [104]. If deforestation narratives support government policy, it therefore works in the interest of the government to maintain such narratives. The problem then is how to challenge or undermine such narratives. One way of challenging narratives is to find ways in which they can be improved or superseded [2]. Another way would be to legalise certain aspects of them that have been criminalised, as Kill has proposed with regard to lighting fires in Madagascar [137]. A third suggestion on how to challenge deforestation narratives is through counter-narratives. One way counter-narratives are created is when people are able to voice their own story, as the Kayapo in the Amazon did. But these remain the exception, and until the marginalised can be heard, they will remain the scapegoats. Another way of creating counter-narratives is through narrative deconstruction [29]. It might be asked how deconstructing deforestation narratives that blame the rural poor will affect policymaking decisions. This is unlikely, but can be seen as an attempt to remove a discursive tool that is used to perpetuate social injustice. Identifying such narratives for what they are is an important first step.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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