Modern Adverse Trends Which Affect the Wildlife Management Efforts

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Abstract

In this chapter I will reach beyond the conventional in wildlife management and ask some inconvenient questions which have plagued wildlife and biodiversity ecologists for some time now, with unfortunately few answers so far. Many of us, as we struggle with Dasmann's premise, have started to ask these uncomfortable questions about western understanding and scientific concepts as we apply them around the developing and tropical world. We ask questions about the production systems we, and this includes scientists, promote, the governance arrangements we help to put in place, and the stakeholders we support. We know well that we often fail to reach wildlife and wildlife-dependent communities alike. We also know that our favourite systems we like to promote do no work in the real world and that we are losing the middle ground (e.g. wildlife which can be sustainably harvested) of productive and healthy ecosystems. But we also have countries, places and projects where approaches have started again to reflect ethnic and

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national identities and do things better than western approaches. It will be clear that few of the trends driving the loss of the middle ground I describe in this chapter are reversible in our world. What can happen, however, is that communities and traditional landowners, the real guardians of wildlife, can claw some of the lost middle ground of productive wildlife management back.

Keywords

Alternative wildstock-livestock scenarios • Corporate landuse shift (CLUS) • Japanese deer hunting culture • Kangaroo harvest • Land and property rights • Land and Wildlife Ownership • The government's animals • The new western and scientific commons • Poverty, land and wildlife rights • Loss of wildlife harvest traditions • Dasman's Premise • The Tragedy of the 'Good People'

Introduction: Allow Me to Shake Your Faith!

In this chapter I will reach beyond the conventional in wildlife management and ask some "inconvenient questions" (with few answers so far) which have plagued wildlife and biodiversity ecologists for some time now. Many of us, as we struggle with Dasmann's premise, have started to ask these uncomfortable questions about western/northern and scientific concepts as we apply them around the developing and tropical world, the production systems we (and this includes science) promote, the governance arrangements we (help) put in place, and the stakeholders we support. We know well that we often fail to reach wildlife and wildlife-dependent communities alike. We might also suspect that we misapply science with its western contexts and jeopardize the growing efforts around the world to find alternative ways. And we also see too many examples where our growing number of responses is too much costly talk and too little action, most of them deeply compromised by what we fail to act upon. And not unimportantly, we well know that the ways we measure our successes (money spent, papers written, projects "finalized") are a very poor, often misleading, measure of success. And last but not least, we are surrounded by a growing plethora of "arrangements" where the state fails to regulate where it should (often the corporate sector), yet also prevents markets to develop where it should (the communities) support them.

Before I do this, however, it is crucial to frame all that around the "factors" which need to be addressed in the tropics as they develop: poverty, growing inequality, abused women and children, and an increasing industrialization of agriculture, forestry, and fisheries where valuable resources go to the powerful and often corporate, while the dregs are left for communities. Driven by under-regulated multinational corporations from the developed world the latter has started to replace what regulation there was and appropriated what was community land and goods. These industries and organizations have been savvy to access and exploit the increasing amounts of money spent by the international community, also for conservation, which they capture amid gaining environmental credibility – and at great profits. Increasingly we see those players in dominant positions at

international forums, where they can manipulate development agendas, including those of United Nations. Nowhere is this more evident than in climate change action, where the promises and examples of huge carbon profits beckon.

I have chosen some examples for this chapter where I believe things are going badly wrong, not because we do not spend enough money or because our premises including those from science are so bad. Many things in matters wildlife go badly wrong because there are trends (ecological, social, economical) at play, poorly recognized and acknowledged, which work against our good intentions, trends which operate at such scales, at times outside of what we can target, at others in places we do not want to touch (land ownership), that our efforts need to be reevaluated and redirected.

Poverty, Land, and Wildlife Rights: The Elephant in the Room

Poverty has, since the Brundtland report, been recognized as one of the major causes for environmental (and wildlife) destruction in the Third World. Not so surprisingly this "discovery" has experienced some polarization and a great global debate about whether it should be the markets, free ones preferably, to correct that "trend" (the "trickle-down effect") or whether there is some intervention required where "the west" stretches its helping hand to wildlife and to disadvantaged people, many of those living with no access to clean water, medical care, sufficient food (see Millennium Development Goals of UN http://www.un.org/millenniumgoals), and are often the hapless victims of political conflict that includes the "landgrabs" of global industries (around mineral, fish, agricultural, soil, and wildlife resources (ivory, pets, rhino horn, shark fins – the list is endless)). In the eyes of two of the world's leading agronomists (Mazoyer and Roudart 2006) these "trends" are destroying the livelihoods (and rich cultural and often wildlife environments) of two billion farmers. Not a minor matter that, but one which should be cause for alarm.

If not all, most wildlife management texts have come from the western world, many of those from the USA, and we have seen how Dasmann's views have more or less foreshadowed (if they could not fully comprehend the full scale of) the interventions I have described in Chapter 3 from "the more fortunately situated lands." Conversely, many texts on conservation and sustainability focus on developing nations, the poor countries where inequity and lack of resources prevail, where warfare is ripe, and where the fate of wildlife seems a minor concern – at least to the national leaders. In a book about wildlife management in the often disadvantaged tropics it would therefore seem one has to be very careful to take these differences into account, or in fact, the book has to be written very differently. So what would these differences be? Quite obviously we will have differences which will relate to the culture, to religion, to the general environment (forest, grassland, wetland), to the abundance of particular resources, to the state of the livestock industry, to the range of available options, and to the wealth of the nations. Each of these will have a fundamental role to play in how national conservation and

wildlife attitudes and forms of management (or the lack thereof) are being applied. More importantly, however, than any of that is, I suggest, the question of land rights, forest rights, and wildlife rights. Only if these are solved can we talk about the responsibilities. As we see even World Bank has recognized that crucial question and discussed its implications, yet again in a ritual of sorts, with a policy paper 2014 (see GLF Committee 2014).

This "new" focus on land and property rights, if hardly new, is of great significance. Yet how will it be implemented? As land rights are so closely connected to mineral rights, carbon rights nowadays (and perhaps water and species rights), most governments have tried to keep them away from "landowners," as they seek their "resource rent," especially if these have "only" indigenous or "traditional" land tenure. Access and rights to forests and what lives in them (wildlife, NTFPs, biodiversity) are the elephant in that "land rights" room, and it will be essential to make sure that land rights are looked at in the context of wildlife (we have seen that people in Tanzania call wildlife the "government's animals"; one could say the same thing in China, Bhutan, or here in Australia) and protected area legislation accompanied with greatly improved support to improve access and sustainability of these resources, many of which have moved beyond the reach of communities. Once we assume that land and wildlife rights would be given back to communities we would run into problems. We would realize that wildlife has often become inaccessible to communities, including some 350 million indigenous people for whom it is their "land use," because of what the west has made out of it, often protected areas or a new "scientific (western) common" where access to wildlife resources is determined by some charity in London or a scientific expert group from Genève. Communities which can recapture their traditional/indigenous uses would need to regain ownership of what has become a "western commons." This trend has been greatly exacerbated by a growing vast tourism industry, often around wildlife, which has been able to capture the proceeds of much western conservation action, while contributing almost nothing. It has also been exacerbated by the progressive depletion of wildlife on nonprotected land, often overcompensating for lost protected wildlife. And if that should not have been enough this protection includes species which are, as is the case of wild boar in Bhutan or China, at "superabundance," through the depletion of megapredators, (western) animal protection legislation, and agricultural changes (e.g., Bauer et al. 2005; Boyd et al. 2003).

Wildlife in the "Awkward Indigenous Space"

Nowhere are such poorly defined or absent land and wildlife rights more important than in the "awkward indigenous space." Many indigenous people have not developed what the west has called agriculture and forestry within increasingly modified food and fiber systems. They continue to rely on wildlife to meet their daily needs in sophisticated wildlife use systems. While these systems have been considered inferior as they produce less quantity with more effort they have, because of their reliance on diversity, managed to coexist with what the west has called "wild,"

"wilderness," and "wildlife." More ominously such systems have led to lingering concepts of "TERRA NULLIUS" which have, here in Australia, or in the Amazon, for example, extirpated indigenous land and wildlife rights. The only modern "landuse" – and the west still hesitates to call it that – which the west has been able to develop around wildlife is either recreational fishing and hunting or tourism, mostly once the land has been "put under protection." Much of the tragedy of the world's indigenous nations, and the wildlife they depend on, lies in this modern divide where cared for and loved community land has joined the 'global (scientific, western) commons, that "awkward space" which is at odds with the modern world and with the ways the west has discarded "wildstock" in favor of a selected few (livestock). Much has been written about that (e.g., Birckhead et al. 2000; Sakulas et al. 2013; Bauer and English 2011a, b), and there are even changes. In Canada, New Zealand, and the Australian North (see Northern Land Council and NAILSMA) some displaced indigenous groups have regained their land (or at least some of it) and have started, with support from the (inter)national community and the state, to exercise their land rights and own land use systems which were mostly hunting and fishing. There is a great need that other indigenous people in the tropical world are given these rights also, if only as an act of climate justice while the world implements REDD+.

The "Tragedy of the Commons" Revisited

In our relationship to the sea and its many goods, we are currently standing at a crossroad. We can either turn right and go down the path of agricultural production (as we have in our terrestrial environments) and attempt to simplify the sea, replace wild fish life with "domesticated fish," and try to control the processes around that. We can also turn left and manage marine systems with the better understanding and, more importantly, a more humble attitude toward the complexity of food chains and our *(in)ability* to manage them "scientifically" (population ecology handles two or three species models well (at least over some years) but fails to predict community ecology). We would do this because the left turn is the sensible way to go if we want to avoid all the terrestrial repercussions of terrestrial agriculture repeated in the sea. One could even argue that while the terrestrial environmental "side effects" we created around agriculture are already taxing us to the limit, the management of marine shifts (which will be the consequence of the right turn) will be well beyond current and future ecological, political, and social management capabilities (even more so with a changing atmospheric and marine climate). Rather than going down the path of aquaculture as response to the depletion of marine environments, as happened in the terrestrial (including freshwater) ones, there is still time to choose the wise path which carefully manages and restores what we still have and, ever so carefully, supplements it, not replaces it, with more sophisticated systems as our understanding grows. Not with some quick fixes we just happen to think of, because we have ruined the other ones. Much of that shift will happen, however, not because of whatever ecological decisions we might make but because of ownership (Fig. 1).

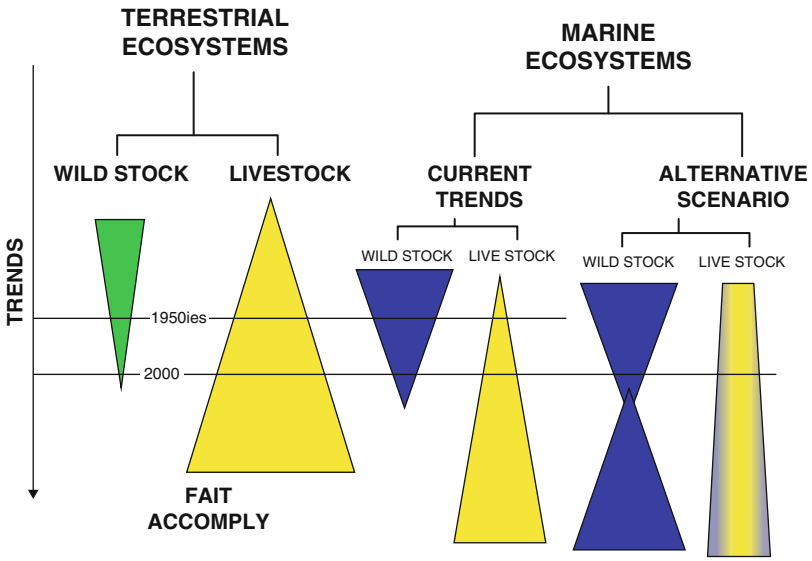

Fig. 1 Alternative wildstock-livestock scenarios for terrestrial/freshwater and marine production environments

Ownership as a Neglected Key Factor in Wildlife Management

Ever since Hardy coined the term "Tragedy of the Commons" there has been a clear and logical economic and social rationale why lack of ownership of a resource, in that case FISH, led to poor governance, management, and eventually depletion. This logic can be applied to the forests in Nepal, which, once taken under the control of the government, away from communities, started to disappear (they had turned into commons where nobody had responsibility and could benefit); to fishes in many ocean zones where, due to lack of legislation, everybody (in particular foreign fishing vessels) tried to catch them before the competitor did; but also to the Queen Alexandra Bird Wing (the largest butterfly in the world) in Oro Province of PNG, which, despite being sold for almost US$ 10,000 a pair (illegally?), disappears because local landowners cannot sell it and breed it in captivity. The reason for that is in Annex 2 of CITES and cannot be sold legally while rainforest land falls to the axe or oil palms. The list of such "worthless" wildlife by national or international decree is endless. Because of this lack of ownership, people do not plant trees (why should they if that just costs money while the future resource value goes somewhere else; moreover, if the government does this they might lose their land once forests are established as many landowners feared in Nepal). In each of these three cases even the economic rationale for community ownership is clear, in fact overwhelming. It is also workable (community forestry in Nepal now thrives; many fisheries under community control are, remain, or have become again highly productive and sustainable) and benefits the wider community instead of often a

foreign fishing industry or illegal gangs. The Oro birdwing can be very successfully bred in captivity (for sale and reintroduction of wild populations). And perhaps even more importantly, due to this lack of ownership and the capacity to make an income it is the illegal trade (often in the shape of organized crime which thrives with that incentive) which finds such legislation an incentive while for the wider good population base it becomes impossible to develop their own management (which would drive the criminal gangs out especially if supported by police). This "tragedy of the good people" has now become firmly entrenched around a growing number of species as they join CITES Annexes.

The "Government's Animals"

Another form of "tragedy of the commons" occurs when the government seeks to search its resource rent at the expense of communities and landowners. Wildlife in western (and in particular Anglo-Saxon legislation on which much postcolonial legislation of tropical countries in now modeled), whether on private or on public (protected), land often belongs to the State. While the intent of that legal step was often the protection of wildlife that purpose does not work so well any longer. For many communities it has led to a "western or scientific (science often supports that) commons," where wildlife has become either of no interest to the community (landowner) any longer or, worse, is now only accessible to either illegal markets, to the "nonconsumptive use" of tourism (which rarely pays a resource rent), industrial bioprospectors (which do neither mostly), or industries (often foreign with government support) which were able to develop in that "commons" (common in marine fisheries). An ambiguous role is played by science which mostly works against communities and landowners as only the state and industry can afford it. To me the most telling case of such an unjust and divisive system is the NSW kangaroo harvest where, with the support of government, a corporate kangaroo harvesting industry with only several large companies has been able to appropriate the (state-owned?) kangaroos on private land, with landowners receiving nothing. Much has been written about that deeply flawed and divisive system, few independent (not industry-paid) scientists would defend it, yet it has been able, because of its (paid by the industry?) government and scientific support (policies, legislation), to persist and even grow (e.g., Grigg 1988; Bauer and English 2011a, b). Thanks to "its scientists" it is even flouted in international and misguided circles as "best management practice."

In this case "kangaroo rights" have been denied to landowners by the state, yet given to an industry which uses its clout (including its ability to employ scientists (landowners cannot afford them)) to exclude landowners to what grows on their land yet could be a major resource for them (e.g., Grigg 1988; Bauer and English 2011a, b). This remains so, even after serious concerns about the management itself (scientific data collection and analysis, population estimates) have emerged (Mjadwesch 2011). Similar trends are evident in many parts of the tropical world with valuable wildlife resources. Such wildlife, in Tanzania called "the Government's animals," might benefit from protection because of tourism and legislation

or through scientific harvesting plans (developed by the scientists for the industry). It has, however, lost its value to landowners which can (and will) plan around and against it. In most cases this is more adverse to wildlife than the lack of a scientific study. As we can see in the case study below this is not restricted to developing countries or wildlife harvest but also the case in Australia where communities are excluded from participating in species rehabilitation programs by government agencies.

Today, wildlife often remains a responsibility for the state and its agencies ("agency animals") which have insufficient resources – and intent (many contradictory interests) – to manage it, while others (tourism, for example) pay little or nothing. Landowners, indigenous and farmers alike, but also those who would seek legitimate income, and a vast number of people with goodwill, remain excluded. In this no-win situation the gap between reality and intent grows wider by the day. Wildlife remains without value to most, landowners are deprived of an income source, the state has a responsibility it cannot carry, the public is excluded with all its concerns (and resources) – and wildlife declines. Although one could argue that NGOs have broken that culture of nonparticipation, the reality is that many government arrangements of this type suit them all too well (having gained many similarities with corporate industry) in protecting their own role, incomes, and resources.

The Bridled Nailtail Wallaby, Brush-Tailed Bettong, Bilby, and Hairy-Nosed Wombat as Doomed "Agency Animals"

Some years ago I was involved in an (unsuccessful) reintroduction of nailtail wallabies (NTW) in NSW, Australia. The bridled nailtail wallaby (left), believed extinct, was rediscovered in 1972 at the town of Dingo on a private property in Queensland. The property owner was bought out by the government (some 12,000 ha), a national park established at the site, and a NTW Recovery Plan written by the country's experts (Lundie-Jenkins and Lowry 2005). Some 30 years later the population continues to decline, there are few more than the 300 animals left then, while Western Plains Zoo gave up its very easy and successful breeding because lion and Black rhino programs were more popular and lucrative (government support, visitor dollars, prestige). For landowners (supported by WPZ) breeding of the above endangered native species (and others) would have been easy. Landowners could have been guaranteed a market for surplus animals and for a fraction of the costs. Viable populations of many thousands of animals could have been established on many private properties with the (happy) property owners deriving income from their management (and from tourism ventures). Nothing happened. The state insisted that only IT could manage endangered species with everybody being losers (Based on Bauer and Cameron 2001; Bauer et al. 2002; King 2006) (Fig. 2).

Fig. 2 The captive breeding release of endangered species in Australia (From *left* to *right*: bridled nailtail wallaby, brush-tailed bettong, bilby, and hairy-nosed wombat) is now as before something dear to the public. Easily done (from a professional point of view especially if supported by zoo infrastructure and staff) yet generally unsuccessful from saving a species. The exclusion of communities, landowners and the private sector from conservation work is one of the major reasons why this is the case

The Loss of Wildlife Harvest Traditions

The decline of traditional and indigenous harvest systems, as has happened around the world in countless examples over the past century, has been, and this is often overlooked, synonymous and often causative to the erosion and loss of traditional and indigenous knowledge systems around wildlife and natural systems in particular. The Anglo-Saxon distinction between protection and production, distributed around the world first through colonialism, later through the environmental movement with its many agencies and projects around a growing number of protected areas, has affected many traditional wildlife harvest management systems in particular in the nondeveloped tropical world. Here, where seemingly no organized groups were around (recreational hunters, for example) to stop that (indigenous people also come to mind) these systems proliferated and progressively displaced indigenous people and their land use. There are countless stories of this disownment around the tropical world. While often unable to protect their target species in these projects, local, traditional, and indigenous harvesting systems, often sustained over centuries previously (and well capable of "modernization"), were destroyed along with the land use, culture, lifestyle, and value systems. Local wildlife knowledge and harvest systems often decline together, to be replaced by a value vacuum around wildlife which is in nobody's interest. I have given two examples from my own experience. The decline of indigenous/traditional knowledge and harvest systems in Wuyishan Biosphere, Fujian Province, China (see Boyd et al. 2003), and the current deer management dilemma in Japan, also based on the loss of a hunting culture along with modernity. Both show a modern stalemate in wildlife management and utilization which works against local communities and wildlife.

The Loss of Japanese Deer Hunting Culture

In February 2011 I was invited with a colleague to offer advice in a deer management project between a university and Japanese land use authorities. Over the 10 days we spent in Japan we gained a unique perspective of a deer management problem which seemed as intriguing as it was absurd. It showed a modern Japanese society which had, while continuing to insist on wild harvested whale meat, lost its taste for millions of native deer, *Cervus nippon*, which lived and multiplied in its forests (which they damaged greatly) and mountains where only few were prepared to hunt it, sell it, and, above all, eat it. To change this problem and perception among the public, the Japanese government was far from idle, and our first "lesson" consisted in the attendance of a deer preparation ritual by one of Japan's most famous chefs of French cuisine (as applied in Japan, French cuisine enjoys a very high reputation). In order to promote venison consumption, he instructed the Japanese public in a TV show how to butcher the deer and how to cook it, following a French recipe. While my colleague and I were watching in fascination we were served beautifully prepared little parcels of deer sushi, obviously catering for the more traditional-minded of the hundred or so attending journalists. Afterward we went for a tour around Japan, mindfully interrupted at times with a French deer meal, to show us the extent of the problem. What we learnt was that, along with parts of Europe and the USA, deer had in Japan also benefited from modern forestry with its abundance of cover and food, the cessation of agriculture in other parts of the landscape, and a legislative environment which did not seem to encourage hunting. There had also been a very pronounced trend among young Japanese not to join hunting clubs and the declining fraternity of hunters. It also became clear that our Japanese friends were at a loss what to do about it. There did not seem to be an attempt (as we first thought) to farm deer (misguided in any way as it would have been a distraction from the management of the wild population, essential to reduce their impact on forest regrowth and quality); our friends much rather thought that one could catch deer in large numbers, to kill – and bury – them. There was little thought so it seemed to us who would do that (nothing less than a national hunting system) and that it would have to involve firearms and a large number of trained hunters – judging from the size of Japan, half a million at least. While this deer overpopulation seemed to be a grave problem across much of Japan, there were attempts, for example, in Hokkaido, to develop hunting tourism around Japanese deer, as well as some other unique and abundant species such as the Japanese serow, but nothing which was suitable to effectively reduce deer number and revive the use of a healthy, humane, and, for many, delicious supply of prime meat (I would estimate that the national harvest could be in excess of one million animals (~40,000 t of prime meat). A final visit to Nara, famous for its huge wooden

(continued)

temple and its resident population of deer (some 7000 + which share roads, parks, and sometimes restaurants with the local populace and the many Japanese tourists who visit for that very reason) seemed only fitting to impress on us the complexity of this modern relationship with deer which has developed in modern Japan. Japan is not alone with that problem. It is shared by an increasing part of the western world and more and more countries in the tropical world also, where western value systems, conservation legislation, and protected area systems have driven hunting – the harvest of wildlife – more or less into the underground as an activity, not a legitimate land use any longer, condemned to be legally treated often as "bushmeat" while western meat, cattle and sheep (for which huge areas of forests are being cleared), are being offered as THE alternative.

As we can see from this example this vacuum in wildlife use (including fisheries) through (the prevented) lack of ownership but also an inability to modernize (resources, lack of science, etc.), for example, in agriculture, plays into the hands of a land use shift away from traditional owners toward those who can afford it, and who have the support and power from governments. It is not a minor shift but one which currently transforms the tropical world.

The Corporate Land Use Shift (CLUS)

What I have called "The Corporate Land Use Shift (CLUS)" is about the acquisition of increasing tracts of valuable land and crops by increasingly large, technologically highly advanced corporate and multinational entities, including countries now (also see landgrab). This process, as described by Mazoyer and Roudart (2006), is destroying the livelihood of farmers around the world and is leading to the homogenization of agricultural production in terms of wildlife/biodiversity loss, see Figs. 4 and 5.

After the great diminishment of wildlife and ecosystems a new phase has commenced where much traditional agricultural land is bought by foreigners, multinational firms, but also countries (such as China) which want to secure food production. The direct/indirect/cumulative impacts of this new wave of land use change are mostly unknown, yet the combination of pesticide and GM typical for these systems will lead to a second wave of diminishment of wildlife which will make irreversible past losses and negate what might be gained in conservation efforts.

Whether in forestry or in hydrodevelopment or agriculture the corporate approach comes at a large cost which is paid by the public, the rural communities, and ecosystems with their wildlife and their many unaccounted essential environmental services these provide for free for the thankless users. The most astonishing feature of that way of "managing" the environment is the sheer fact that the enabler and indeed power behind much of that approach is provided by SCIENCE. Not so

Fig. 3 A Japanese lady posing with one of the 7000+ Japanese deer (*Cervus Nippon*) which roam the streets, parks – and temples- of the historic city of Nara in Japan

Fig. 4 A global process, the acquisition of the valuable assets of communities, often through mining and oil exploitation, landgrabs, and valuable wildlife

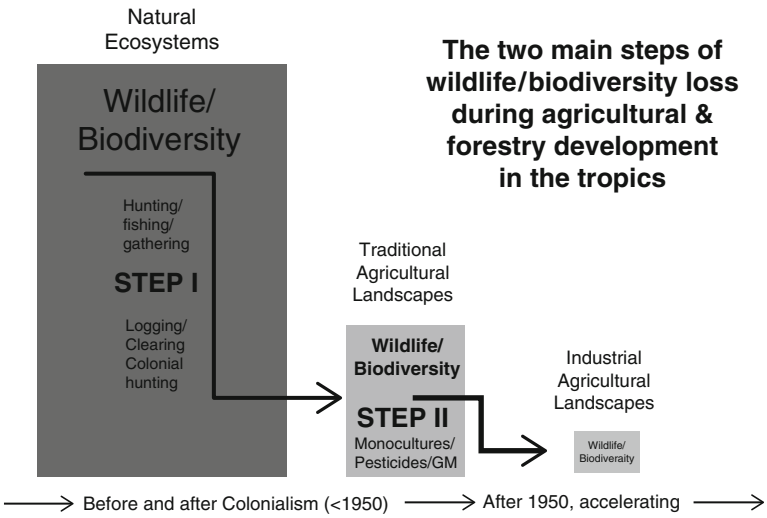

Fig. 5 Two main steps of wildlife/biodiversity loss during agricultural and forestry development in the tropics

much by the knowledge it generates, which one could say is "neutral," but by the ways that knowledge is generated, for what purposes, by whom, and to whose benefit. Scientific knowledge, in the hands of those who do not care yet have the power, is a dangerous thing indeed, a sharp tool we can ill afford.

Conclusions

Despite all the efforts and projects to save elephants, the primates of Madagascar, PNG's birds of paradise, The giant panda, the tiger, the bird-wing butterflies, and the blue macaques in the Amazon, there are environmental and social trends in place in the tropics which thwart many of our efforts. Much of our wildlife in the tropics continues to decline because we have failed to reach it, still misunderstand what ails it, and also perhaps have started along an action path which has become too strong in rhetoric, databases, and marketing hyphes to be able to capture reality and act in ways that achieve results. Apart from all that we have a rapidly changing human demography in tropical areas where the nonwest has become at times more western than the west itself and where western conservation rhetoric has all but displaced what used to be traditional or indigenous and actually worked quite well.

But we also have, and that is perhaps more significant, countries, places, and even "projects" where approaches have started again to reflect national identities and also which do what the west has tried to do, differently, – and better. There is a country, China, which has become so aware and proud of its natural heritage that it has not only implemented projects and policies which are stronger than anything the west has ever seen but also done it in ways which are uniquely its own. Giant panda

conservation only became successful after China had started to "own" it, doing it in ways which reflected its own culture, not that of the west and of charities which were more concerned to use it as logo to raise funds. Anybody doubting that statement should look at the sorry state of most rare species breeding and reintroduction efforts in Australia, where they are pursued with much fanfare and science, before trickling out after a few years, while over in China, project after project manages to rescue from the brink and bring back into the wild species such as the crested ibis, the golden takin, the giant panda, or Pere David's deer, which were considered as good as extinct in the 1980s. There are also African countries which have finally rejected the protected area model imposed on them from the west but started to harvest and sell for good money the rich and diverse wildlife which had, on that unique wildlife continent, often provided a good alternative to agriculture. These are Namibia and South Africa, which have shed much of that colonial legacy. And there are countries such as Brazil or Ecuador in South America, where the efforts now and the capacity of their own governments dwarf anything that the west could – and would – offer.

It is clear that few of the trends I have described are reversible in our world. What can happen, however, is that communities and traditional landowners, the real guardians of wildlife, can take some of that back and, figuratively speaking again, claw some of the "lost middle ground" back.

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