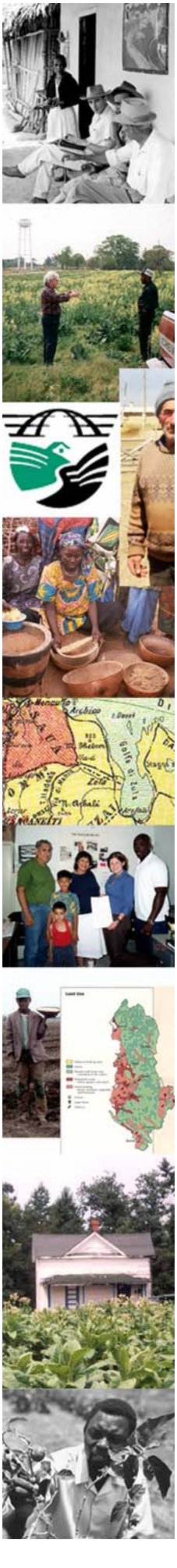

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Land Tenure Center

STRATEGIC TRADE-OFFS FOR WILDLIFE ECO-LABELS

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Provided by the **Land Tenure Center.** Comments encouraged:

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STRATEGIC TRADE-OFFS FOR WILDLIFE-FRIENDLY ECO-LABELS

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Abstract: Labels on products aim to influence consumer behavior. Consumers buying wildlife-friendly, labeled products may hope to help conserve wildlife, but eco-labels vary in their claims and credibility. We define three types of wildlife-friendly eco-labels, according to their potential to conserve wildlife, and obstacles to convincing consumers of their claims. Supportive eco-labels donate revenues to conservation organizations and are at best indirect interventions, opaque to consumer scrutiny. Persuasive eco-labels certify manufacturing / collection practices under the assumption wildlife will benefit as a result. Protective eco-labels directly assess wildlife conservation by certified businesses, which can attain the highest credibility but demand the highest verification standards. Verifying whether producers conserved wildlife is costly, time-consuming, and technically challenging because wildlife ignore property boundaries and experience stochastic demographic events that obscure the role of human economic practices, among other reasons. Yet among components of the environment, wild animals are among the most inspiring and marketable.

- Eco-labels claim purchases contribute to environmental protection. Wildlife-friendly eco-labels claim to conserve wildlife.
- We distinguish three types of wildlife-friendly eco-labels by how they verify that wild animals were protected or restored. The most credible but costly are Protective labels that must verify outcomes for wildlife in the vicinity of certified businesses.
- Wildlife conservation is difficult to certify credibly because wild animal populations fluctuate naturally and field verification is time-consuming, technically complex, and costly.

INTRODUCTION

Environmental conservation organizations have long sought the holy grail of market-based financing for the protection of nature. Ecotourism, hunting fees, and conservation banking are among the many examples of market-driven efforts to conserve wildlife and protect wild lands from destructive activities (Ferraro 2001). More recently, the biodiversity sector has sought consumer financing for conservation incentives. Among these efforts are various product-labeling and certification schemes (eco-labels) meant to offer a price premium or enhanced market access to producers who support conservation (Amstel et al. 2007a,b).

Uniting consumers and producers as constituencies for conservation demands two things: (1) a clear, direct incentive for producers to conserve wildlife; and (2) obvious links between one system of manufacture / collection and the conservation of wild animals that have meaning to consumers. These demands may rule out several conservation approaches that could effectively conserve wildlife but do not meet the expectations of consumers or producers. For example, sustainable harvest of wildlife has a long history of promoting conservation of that species (Loveridge et al. 2007), but consumers in wealthy nations view hunting as inhumane or anti-conservation (Holsman 2000; Rutberg 2001; Peterson 2004). For another example, reimbursing producers for the costs of coexistence with wildlife (e.g., compensation for wildlife damage to property) can generate perverse incentives, such as negligence in defense of property or retaliation against the wildlife (Montag 2003, Naughton-Treves et al. 2003, Bulte & Rondeau 2005). By contrast, linking revenues directly to success for wildlife (e.g., breeding or surviving) seems to foster pro-wildlife attitudes among producers (Hötte & Bereznuk 2001, Mishra et al. 2003, Schwerdtner & Gruber 2007, Zabel & Holm-Muller 2008). 'Pay for living wildlife rather than dead livestock' is one common way of articulating the latter strategy and its clear link to conservation.

Eco-labels are intended to signal to consumers that purchases contribute to positive environmental outcomes. Signal theory predicts senders aim to manipulate receiver behavior (Alcock 1999), consistent with how product labels aim to influence purchasing behavior (Ottman et al. 2006). The theory also tells us receivers will attempt to discriminate against unreliable, inaccurate signals because poor choices have negative consequences for receivers. Although human communication is more complex, choosy consumers in a crowded marketplace do confront an array of different signals with varying information content and reliability (Amstel et al. 2007b). However, when the interests of both signaler and receiver align -- as with conservation-minded producers and consumers – a reliable messenger can more effectively change receiver behavior (Dunwoody 2007). Therefore, many eco-label schemes embrace transparency, good governance, and verification of standards to convey their reliability and the accuracy of their information content (Amstel et al. 2007b). Indeed, several environmental certification efforts are credited with raising consumer awareness of threats to the environment and of less damaging manufacturing practices (Bartley 2003, Oosterhuis et al. 2005, Ottman 2006). Given the growing interest in eco-labels for biodiversity conservation (Amstel et al. 2007a,b), here we focus on reliability of conservation claims attached to wildlife friendly products.

CONCEPTUAL FRAMEWORK FOR UNDERSTANDING WILDLIFE CONSERVATION CLAIMS OF ECO-LABELS

Wildlife poses special challenges for eco-labels because verifying conservation successes and failures is complex, technical, and costly (Salafsky 1999; Amstel et al. 2007b). For one, verifying whether producers conserved wildlife is particularly challenging because wildlife ignore property boundaries (Naughton 1996, Woodroffe 1998). Therefore, credibly linking one producer to the success or failure of particular animals may not always be possible. Furthermore wild animal populations experience stochastic demographic events that obscure the putative influences of human practices (Adams et al. 2008). Third, many species of conservation concern are wary from past human persecution (van Schaik & Griffiths 1996; Treves & Palmqvist 2007), which makes monitoring expensive and difficult. Fourth, a number of the larger, more charismatic wildlife damage property or threaten people, so incentives must offset losses *and* generate profits to prevent retaliatory killing (Gubbi 2007; Sillero-Zubiri et al. 2007). Finally, wild animals share complex ecosystems with other interdependent organisms that may be adversely affected by human activities, making efforts for one focal species dependent on the conservation of others as well (Estes et al. 1998; Terborgh et al. 2002; Ripple & Beschta 2004). Nevertheless, many charismatic species are iconic in wealthy countries and may provide attractive marketing emblems.

Given the variables summarized above, it should come as no surprise that wildlife conservation eco-labels vary widely in their claims, their certification standards, and their methods for verification. The various claims posed by labels have different implications for wildlife conservation. A review of company Web sites as well as the academic and gray literature suggested three functional types of eco-label—Supportive, Persuasive, and Protective. Each functional type, in turn, has a different relationship to drivers of biodiversity loss (i.e., direct and indirect threats, sensu Salafsky et al. 2002; Treves et al. 2006) (Fig. 1). Eco-labels that claim donations are made to conservation organizations (*Supportive eco-labels*) ostensibly influence remote actors who may act in various ways against threats to biodiversity. However, the effect of a Supportive eco-label on wildlife is obscured by the recipient organization, which is not necessarily accountable to the consumers of the eco-labeled product. Other eco-labels claim to change producers' attitudes and behavior (*Persuasive eco-labels*). These certify businesses that use improved production (collection or manufacturing) but do not verify wildlife conservation by each certified business. Thus Persuasive eco-labels affect proximate indirect threats (Fig. 1). Finally, the third type of eco-label claims to protect particular wildlife or the ecosystems on which wildlife depend (*Protective eco-labels*). These claim each certified business conserves wildlife and ostensibly abates direct threats (Fig. 1).

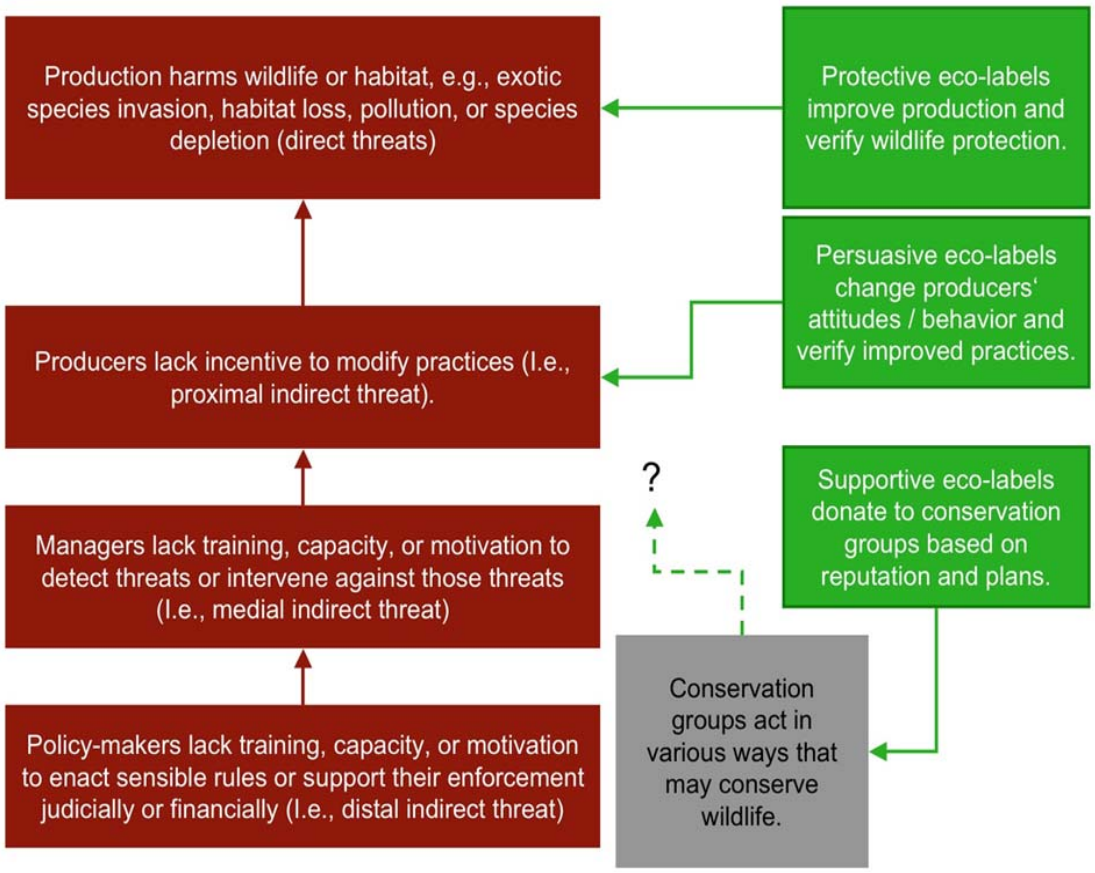

Figure 1: Schematic depicting the point of action for three types of eco-labeling on a chain of cause-and-effect linking indirect and direct threats to wildlife.

The functional differences between these eco-labels have important implications for verifying their claims. Indeed, the most fundamental trade-off is the effort to verify compliance and wildlife conservation outcomes versus the willingness of producers to undergo certification and of consumers to purchase higher-priced items in a competitive marketplace. In general, increasing the verification effort will cut into profits but raise consumer confidence, creating a conflict of interest between producers and consumers (Fig. 2).

Consumer confidence depends in part on how claims are verified and in part on who is communicating with the consumer. Recent research suggests consumers do not generally make significant efforts to compare eco-labels and make purchasing decisions accordingly (Oosterhuis et al. 2005). Third parties such as trusted retailers, brands, consumer watchdogs, etc. are more trusted than producers themselves, unknown brands, unfamiliar messengers, etc. (Dunwoody 2007). Communication with consumers is beyond the scope of this review. Instead we examine how the different conservation claims of eco-labels may be verified.

Standards for certification range from trust in simple assertions (e.g., 'All Natural') to producer testimonials (affidavits from certified businesses) through independent (third-party), scientific verification. For Supportive, Persuasive and Protective eco-labels, one finds functional limits to credibility because of inherent limits on verification. Supportive eco-labels can be audited and perhaps the recipients of donations can be scrutinized, but going beyond this is practically impossible because the recipient usually has no legal obligation to reveal how it used funds. For example, Endangered Species Chocolate is a Supportive eco-label because it claims, "10% of net profits [are] donated to help support species, habitat and humanity" (Endangered Species Chocolate 2007). Their Web site indicates the company donates to various causes, wildlife conservation being one of many. Organizations seeking support from Endangered Species Chocolate must apply for funds and the Web site refers interested readers to recipients' Web sites for more information. Therefore, the consumer must be satisfied with the reputations and philanthropic messages of recipient organizations. Although an auditor can account for use of funds, the skeptic will wonder if funds are being well spent (Fig. 2).

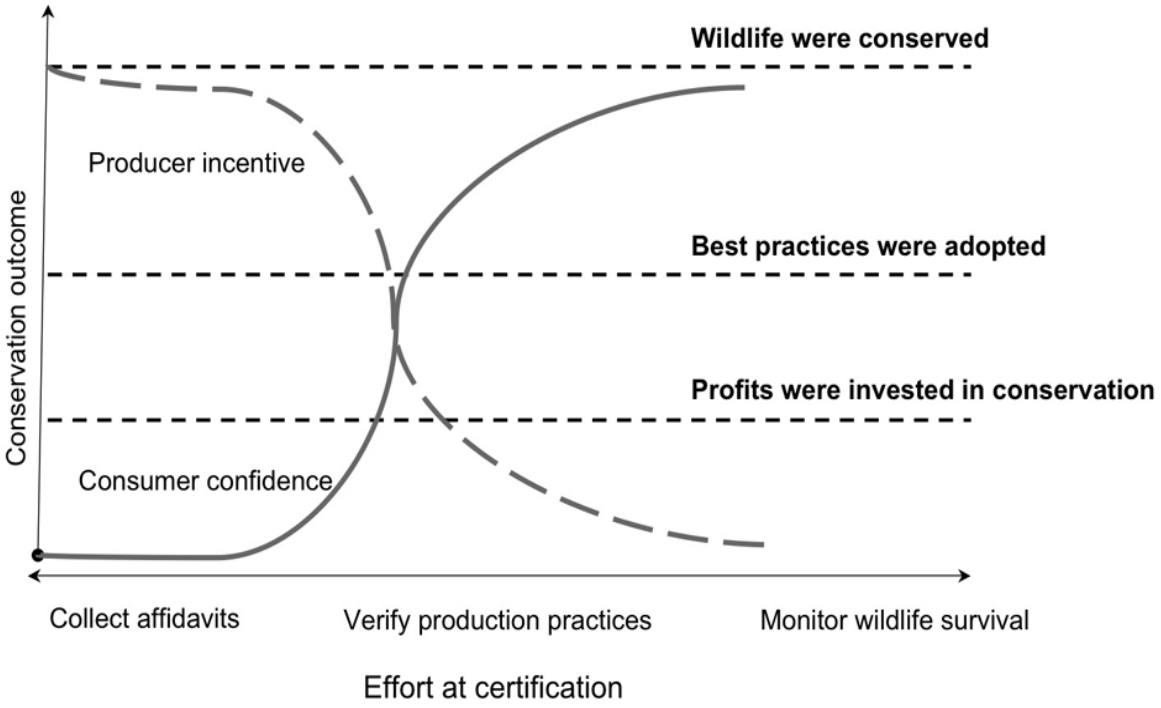

Figure 2: With more effort at verification, confidence in eco-label claims increases, while producer incentives diminish. Horizontal, dashed, black lines denote wildlife conservation outcomes, as follows: the lowest is reached when funds were donated to a wildlife conservation organization, the middle is reached when producers followed best practices, and the highest is attained when wildlife were conserved. A pair of curves depicts hypothetical producer incentives (dashed gray) and consumer confidence (solid gray) as verification effort increases on the x-axis. The theoretical optimal point for an eco-label effort balances consumer confidence and producer recruitment at the intersection of the two lines but the point of intersection depends on local variables.

Persuasive eco-labels directly address the relationship between production and the environment and hence tend to hold more credibility than Supportive eco-labels. Some Persuasive eco-labels rely on producers' affidavits to demonstrate adherence to conservation practices (e.g., Predator Friendly wool). Other Persuasive eco-labels use site inspections or third party verification to certify producer behavior (cf. Searle at al. 2004; Amstel et al. 2007b). For example, Salmon Safe is a Persuasive eco-label because it certifies various businesses based on their pollution, land use, and other practices that affect salmon watersheds. Certification is not contingent on verification of salmon survival or reproduction within the sphere of influence of each business (Salmon Safe, 2008). Similarly, Dolphin Safe Tuna claims to persuade fishers to adopt practices that reduce by-catch of dolphins during tuna-fishing (e.g., no encirclement of dolphins during a fishing trip or use of drift grill nets). Statistics on reduced dolphin by-catch worldwide are cited as evidence of success (Earth Island Institute, 2008). Although laudable, the individual tuna fisher's impact on dolphins is not monitored, nor is the fishing industry's indirect impact on dolphin prey and ecosystems. Therefore this Persuasive eco-label rests on aggregate data from vast areas, not verification of a certified business' direct impact on dolphins.

Protective eco-labels certify their affiliated producers successfully protect or restore local wildlife (e.g., Certified Wildlife Friendly). Verification of improved survival of individuals of key wildlife species or upward trends in threatened species' population indices can potentially earn higher credibility than other types of eco-labels. Verification demands site visits to conduct time-consuming wildlife monitoring, which may require trained staff and sophisticated methods. As a result, verification can be prohibitively expensive. Thus the net profits (i.e., producer incentive for conservation) drop more steeply and more quickly (Fig. 2).

The three types of eco-labels described above have very different theoretical net profit curves and consumer confidence curves. If one assumes the profit curve correlates strongly and positively with the incentive for producers to undergo certification, and one assumes the confidence curve correlates well with the number of consumers who purchase the eco-labeled products, then one can see two distinct strategies. Left of the intersection of the two curves, we have inexpensive products with eco-labels whose claims are opaque or unverifiable (low consumer confidence) but have high volumes and low prices (many producers on-board), whereas on the right side of the cross-over point we have lower-volume, costly products with verifiable claims that garner high consumer confidence and demand premium pricing to offset the costs of certification for their few producers. A number of industry-specific and local variables will determine the precise shape of the curvilinear relationships and the optimal point for certification effort. For example, new monitoring or production technologies can enhance consumer confidence without necessarily cutting into profits in the long run.

DISCUSSION

Our review highlighted a fundamental trade-off for conservation eco-labels: the costs of certification must balance against the price of the products and incentives for producers to change practices. Supportive eco-labels – those donating profits to conservation -- will never attain the highest level of credibility because links to wildlife conservation outcomes are indirect and opaque. By contrast, eco-labels that encourage producers to change manufacturing processes (Persuasive eco-labels) and those that demonstrably conserve endangered wildlife or habitats (Protective eco-labels) can gain higher credibility and more directly conserve wildlife. However they face greater obstacles to success in marketing. Indeed, widespread profitability for Persuasive and Protective certification schemes may

not be a realistic goal and some products may never grow beyond a narrow niche market (Searle et al. 2004). Successful wildlife conservation through eco-labeling schemes demands the careful planning of wildlife friendly production -- balancing producers' needs and wildlife needs (Fischer et al. 2008) – as well as consumer needs.

Regarding producers, eco-label analysts debate the optimal balance of verification and producer recruitment. Some argue that expanding the size of an eco-label dilutes environmental standards and serves bigger business interests rather than small producers (Guthman 1998). In an assessment of Marine Stewardship Council certified fisheries, Searle et al. (2004) advocated an eco-labeling process that establishes low, initial standards to recruit more producers, while attaching requirements that such producers continually improve their production processes. Such compromises, if properly executed, may scale up fledgling certification efforts and help spread more sustainable practices throughout an industry.

Diversity of products under an eco-label will also affect how many producers will opt for certification and how varied and specialized the verification procedures must become. Many—if not most—eco-labels are tied to one or a few products or commodities. Such "narrow scope" eco-labels include fish with low mercury content (Safe Harbor), and sustainably grown nursery plants (e.g., VeriFlora). In contrast, some eco-labels can be applied to a wide variety of commodities connected by a desired environmental outcome. Salmon Safe and Certified Wildlife Friendly products fall into this category: because very different businesses (wineries, farms, and real estate) can be certified if they follow practices that minimize threats to the associated salmon fishery and threatened wildlife respectively.

Regarding consumers, available research suggests few make significant efforts to compare eco-labels and make purchasing decisions accordingly (Oosterhuis et al. 2005). In the US, for instance, most eco-labeled fish products find their way to consumers via specialty markets (Searle et al. 2004). Indeed, most ecologically concerned consumers may rely on a retailer or a small group of opinion leaders for their choices of environmentally beneficial products. Consequently, costly, scientific certification efforts may only be profitable when aimed at informed retailers and more educated consumer groups rather than broad markets.

Beyond producers and consumers, the needs of wildlife raise broader ethical and practical questions about employing market-based mechanisms to achieve long-term conservation goals. There is considerable skepticism about whether consumerism could or should contribute to conservation, and critics of such market-based or neo-liberal schemes argue that such approaches can reinforce perverse incentives that lead to environmental degradation (ref?). For example, if popular fads disfavor a particular eco-labeled product, will the certified producers reject the wildlife or hold them 'ransom' in exchange for continued flow of revenues? Still, eco-labels offer a practical response to the urgent, global crisis of biodiversity loss, and we have attempted here to clarify their varied claims and how consumers or their agents might discriminate between eco-labels based on functional effectiveness in conserving wildlife.

Eco-labels of all sorts face three challenges common to many environmentally preferable, product-marketing efforts (Ottman et al. 2006). These are sometimes referred to as the three C's.

Consumer value is paramount: Most people buy products based on perceived quality or convenience, not the diffuse benefits of positive environmental outcomes (Oosterhuis et al. 2005). Thus, environmentally preferable products must also surpass the competition in one or more salient dimensions. Persuasive and Protective eco-labels may enjoy an advantage if they can vouchsafe

producers or clearly show consumers the evidence of wildlife conservation. This advantage might give them access to dedicated markets, and insulate them from competition with more mainstream goods.

Credibility of product claims is crucial: Eco-labels not only face standard consumer skepticism but environmental watchdogs, consumer interest groups, competitors, and a free press will investigate the veracity of claims. This scrutiny has sunk eco-labeled products unable to prove their claims (Ottman et al. 2006). Agrobiodiversity conservation claims associated with sustainable agriculture are beginning to experience such scrutiny in Europe (Oosterhuis et al. 2005, Amstel et al. 2007a,b).

Calibrate marketing messages to reduce confusion: Many consumers face dozens of competing claims about products without the time or wherewithal to evaluate labels, text, or advertisements. Producers must communicate the benefits of their goods quickly and easily to any audience, in hopes of building lasting relationships to loyal customers.

Eco-labeled products must prepare to enter a crowded market with hundreds of brands and labels touting any number of benefits to the consumer. Wildlife conservation organizations may be ill prepared for this arena. Similarly, the obstacles to success in the marketplace go beyond branding, and include trade regulations, quality and volume demands of retailers, and innumerable other impediments to swift sales (Aquino & Falk 2001). Wildlife conservation groups attempting eco-labeling would do well to collaborate with business experts to design effective marketing campaigns and organize collectively, so expertise in verifying wildlife conservation is connected to expertise in reaching retail and wholesale outlets and persuading consumers. It may not be out of the question that wildlife conservation organizations find their most effective role as certifiers of wildlife-friendly manufacturing.

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