

# Critical barriers to green product adoption a segmented diagnosis in Haryana

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## Abstract

*The adoption of green products in Haryana remains uneven despite strong policy support for sustainable agriculture and energy-efficient technologies. This study provides a segmented empirical diagnosis of barriers affecting green product adoption among urban and rural consumers in Haryana. Integrating the Theory of Planned Behaviour, Green Trust Theory, and Price Sensitivity Theory, the research examines how price perception, awareness, certification credibility, and green trust influence purchase intention. A structured survey of 400 respondents (200 urban, 200 rural) was analysed using reliability testing, factor analysis, regression, and independent t-tests. Results indicate that price perception is the dominant barrier in rural areas, whereas green trust and scepticism toward green washing are the principal barriers in urban markets. Certification credibility significantly influences trust formation across both segments. The study contributes a state-specific segmented behavioural model and offers differentiated policy recommendations to enhance sustainable consumption.*

**Keywords:** Green Products; Consumer Behaviour; Green washing; Certification and Labelling; Urban – Rural Divide; Sustainable Consumption; Haryana; Affordability Barriers; Market Segmentation; Energy - Efficient Products; Organic Farming; Policy Interventions.

## INTRODUCTION

The Urban - Rural Sustainability Divide

The sustainable consumption landscape in Haryana is characterized by a fundamental market bifurcation, driven by significant socio-economic disparities between urban and rural populations

(Rani, Sandeep, & Kalkal, 2024; Business Standard/India, 2024). While the state demonstrates a strong policy commitment to sustainable agriculture and energy efficiency – for instance through subsidy schemes for energy-efficient agricultural pump sets and large-scale deployment of solar irrigation pumps (IEA, 2013; Renewable Watch, 2024; Renewable Watch, 2025) – the

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resulting green product market is highly segmented and uneven in reach (Haryana State Action Plan on Climate Change, 2017; NewsDrum, 2025).

Urban consumers, typically possessing higher levels of education and income, exhibit a strong willingness to pay (WTP) a premium for green products, driven primarily by perceived health and ethical benefits (Shah & Asha, 2023; PM, Nair, Gupta & Garg, 2025). However, this segment's purchase intention is increasingly constrained by high levels of scepticism towards corporate claims and widespread green washing (Khatti & Tomar, 2024; SN Business & Economics, 2025).

Conversely, the large rural population represents a substantial area of latent demand, motivated by basic health concerns and tangible economic benefits, such as cost savings from energy - efficient appliances (Waray, Patnaik & Jain, 2018; AEEE, 2024). This potential is critically suppressed by structural barriers: chronic affordability issues due to prohibitive price premiums, limited product availability stemming from inefficient logistics, and a lack of local, trusted product promotion (Nag & Chowdhary, 2019; CEEW / IRES, 2020; Gupta, Sarkar, Deb & Jana, 2025).

For Haryana to transition into a truly sustainable and inclusive consumer market, policy intervention must move beyond current supply - side subsidies to implement demand - side strategies that address the WTP disparity and rationalize the fragmented certification systems (BEE, 2025; CEEW, 2018). Future growth depends on building transparency to secure urban trust and ensuring cost - effective, accessible distribution channels for the rural majority (CEEW, 2018; JMSR, 2025; Jain et al., 2023).

#### **Objectives:**

1. Identify barriers to green product adoption.
2. Suggest segmented policy strategies.

#### **Critical Barriers to Green Product Adoption: A Segmented Diagnosis**

Consumer purchasing behaviour in Haryana is impeded by a distinct set of barriers tailored to each market segment (Dua, 2024; Nath & Agrawal, 2022; Rani, 2024).

#### **1. Rural Barriers: Affordability, Access, and Promotion**

The primary constraints in rural and semi - urban districts are logistical and economic. Studies show that limited adoption in these areas is attributed to affordability issues and poor availability or restricted supply of green products. The reliance on local markets means that specialized green products often fail to achieve sufficient distribution depth (Mohanty, 2013; IJSDR, 2024; Ascent Group India, 2022; IJIRT, 2025).

Beyond physical access, rural consumers cite a lack of knowledge and promotion, and a corresponding lack of belief in the advertisement claims as restricting factors (IJSDR, 2024; Singh & Verma, 2023). Other psychological barriers include perceiving the exercise of purchasing green products as "complex" and factors related to self - inefficacy – the feeling that an individual's action has little environmental impact – also dampen purchase intention (Joshi & Rahman, 2019; Yadav & Pathak, 2017).

#### **2. Urban Barriers: Skepticism, Trust Deficit, and Green washing Fatigue**

In the urban landscape, skepticism represents the dominant barrier. Green washing – the practice of corporations branding products as 'sustainable' or 'eco - conscious' without making substantial operational changes – is a perfected art that Indian consumers are increasingly recognizing (Nag & Shailesh, 2025; International Institute for Sustainable Development [IISD], 2025). Approximately 71% of Indian consumers report exposure to misleading green claims.

This exposure fosters significant "green skepticism,"

which is defined as an individual’s disbelief towards green products (D’Souza, Taghian, & Lamb, 2006; Chen & Chang, 2013). Research shows that customers with high environmental beliefs, the very segment marketer’s target, are the most sceptical of green washed brands (Delmas & Burbano, 2011; Parguel, Benoît - Moreau, & Larceneux, 2011). This skepticism leads to negative emotional responses and adversely impacts purchase intention (Nag & Shailesh, 2025). For urban consumers, critical factors influencing behaviour include perceived environmental impact, brand reputation, and accessibility of reliable information, all of which are compromised by market mistrust (Joshi & Rahman, 2019; Yadav & Pathak, 2017).

### 3. The Structural Problem of Certification and Labelling

A structural barrier that affects trust across both segments is the fragmented certification system. India operates two parallel systems: the National Programme for Organic Production (NPOP), aimed at meeting international export standards via accredited third - party certification, and the Participatory Guarantee System (PGS - India),

designed for smallholders and domestic markets using peer - based assurance (Government of India, Ministry of Commerce & Industry, 2020; Jain & Singh, 2022).

This duality creates consumer confusion, as they encounter multiple organic logos with unclear credibility (Jain & Singh, 2022; Government of India, Ministry of Commerce & Industry, 2020). Farmers often face multiple certifications, and the system as a whole has been criticized for focusing on “compliance paperwork” rather than actively “building credibility, transparency, and inclusiveness” (Jain & Singh, 2022). Furthermore, ineffective labelling and the complex exercise of understanding claims are specific barriers cited by rural consumers (IJSRD, 2024; Joshi & Rahman, 2019). The failure to unify or clearly delineate the significance of these marks undermines the ability of conscientious consumers, especially in urban areas, to distinguish genuine sustainability from strategic marketing claims (Nag & Shailesh, 2025; Yadav & Pathak, 2017). The following table summarizes the key drivers and barriers characterizing the two consumer segments:

**Table 1 : Segmented Drivers and Barriers Analysis**

Factor Category	Urban Consumer Dynamics	Rural Consumer Dynamics	Strategic Imperative
<b>Primary Motivator</b>	Personal Health, Ethical Sourcing, Aspirational Consumption	Health Benefits, Economic Efficiency (Energy/Resource Savings)	Marketing must appeal to ethical motivations in urban settings and tangible cost/health benefits in rural settings.
<b>Willingness to Pay (WTP)</b>	High (WTP premium 25 - 50% accepted)	Highly Price - Sensitive (Cost is a major barrier)	Requires development of differential pricing models and subsidized schemes focused on rural reach.

<b>Key Market Barrier</b>	Skepticism, Green washing, Brand Trust Deficit	Lack of Availability, High Cost, Poor Knowledge/Promotion	Urban strategy must prioritize transparency and traceability; Rural strategy must prioritize localized logistics and cost mitigation.
<b>Trust Mechanism</b>	Third - Party Certification (NPOP equivalent); Established Brand Reputation	Local/Peer Verification (PGS - India); Government/Community Endorsement	Need to harmonize certification systems and enhance the local visibility and understanding of trusted, localized assurance methods.

## Infrastructure and Policy Interventions: Bridging the Divide

### 1. Distribution Channels and Market Infrastructure Development

The development of structured distribution channels is essential to sustain the growth trajectory (organic fruits and vegetables growth is forecast at 18% CAGR) (Ascent Group India, 2022; Market Research India, 2024). Haryana has initiated significant steps towards formalizing organic supply chains (Government of Haryana, 2023).

The government is committed to establishing specialized organic produce markets in major urban centres like Gurgaon and Hisar. Gurgaon is set to host a market for organic staples, while Hisar will feature a dedicated market for organic fruits and vegetables (Government of Haryana, 2023; Ascent Group India, 2022). These facilities, coupled with free testing laboratories, are designed to enhance quality control, build trust, and provide organic farmers with direct access to high - demand urban consumers (Government of Haryana, 2023). The large - scale India International Horticulture Market (IHM) being established in Sonapat also serves as a critical node for agricultural marketing, potentially

integrating organic produce into regional supply chains (Horticulture India, 2023).

However, the current infrastructure remains fragmented, contributing to restricted supply in rural areas (IJS DR, 2024; Mohanty, 2013). Limited cold storage capacity and high certification costs for export - grade NPOP produce continue to pose logistical challenges (Ascent Group India, 2022; Government of India, Ministry of Commerce & Industry, 2020). To improve small - scale market access, organic farms are advised to leverage digital marketing, build strong brand identities, utilize local farmers' markets, and emphasize certifications and quality assurance in their communication strategies (Rani, 2024; Joshi & Rahman, 2019).

### 2. Policy Assessment: Subsidies and Incentives for Market Stabilization

Haryana's policy environment provides substantial support for the supply side of the green economy. State and central schemes like PKVY offer direct assistance for organic inputs (Government of India, Ministry of Agriculture & Farmers' Welfare, 2022; Government of Haryana, 2023), and specific subsidies promote sustainable practices, such as the ₹30,000 subsidy for purchasing indigenous cows for

natural farming (Haryana Department of Animal Husbandry, 2023). Furthermore, initiatives like crop residue management, which provides subsidized machines and plans for the installation of bio - gas plants, support broader environmental goals and mitigate key contributors to regional pollution (Government of Haryana, 2023; Horticulture India, 2023).

The state's success in cultivating a stable supply must now be matched by interventions that directly manage consumer demand and pricing. The rationale supporting substantial producer subsidies is the expectation that reduced farm - gate costs will lead to lower retail prices. If the cost barriers persist due to market inefficiencies (as suggested by the WTP analysis) (Rani, 2024; Joshi & Rahman, 2019), the overall policy framework requires measures to structurally mitigate the final premium. One viable mechanism to achieve this is through institutional demand aggregation, such as mandating public sector procurement of certified organic produce or energy - efficient appliances. This would generate stable, high - volume demand, allowing producers to capitalize on economies of scale and justify lower retail premiums for the mass market (BEE, 2025; CEEW, 2018).

### 3. Promoting Green Technology: Energy Efficiency and Consumer Choice

Haryana has recognized the vast potential for energy conservation, estimating that up to 25% of electricity could be saved through efficiency measures (Bureau of Energy Efficiency [BEE], 2025).

The state is pursuing ambitious goals, exemplified by the SHAKTI initiative, which aims to increase the deployment of super - efficient household appliances (Bureau of Energy Efficiency [BEE], 2025; Government of Haryana, 2023). Crucially, the promotion of these green technologies has been effectively localized. Utility bodies like DHBVN have organized energy conservation fairs in districts such as Sirsa, Hisar, and Bhiwani, showcasing energy - efficient equipment (DHBVN, 2024). These fairs successfully empower consumers with informed choices through energy labels, capitalizing on the rural segment's high motivation for tangible economic savings (BEE, 2025). This localized approach to green technology promotion effectively bypasses the skepticism and knowledge deficits associated with abstract environmental claims by focusing on immediate financial return. The table below summarizes the alignment of key policies with market objectives:

**Table 2 : Policy Alignment and Market Impact**

<b>Initiative/Scheme</b>	<b>Target Area</b>	<b>Primary Market Impact</b>	<b>Urban/Rural Segment Alignment</b>
Paramparagat Krishi Vikas Yojana (PKVY)	Producer Support	Stabilizes organic input costs; increases certified production volume	Both (Urban demand supply; Rural cost mitigation)
Dedicated Organic Markets (Gurgaon / Hisar)	Distribution/ Marketing	Enhances supply chain transparency; direct farmer - consumer access	Primarily Urban (Aggregates high - WTP premium demand)

Natural Farming Subsidies (e.g., Indigenous Cow)	Producer Inputs	Incentivizes specific eco - friendly methods; reduces farm - gate costs	Primarily Rural (Facilitates smallholder participation in organic methods)
Standards & Labelling / SHAKTI	Consumer Demand / Efficiency	Informed consumer choice; promotes cost savings through efficiency	Primarily Rural (High motivation due to economic savings and reliability)

## METHODOLOGY

The study adopts a descriptive and analytical research design to examine and interpret the patterns, relationships, and factors relevant to the research objectives. A total sample of 400 respondents was selected, comprising 200 urban respondents from Gurgaon and Faridabad and 200 rural respondents from Hisar and Bhiwani, ensuring balanced representation of both areas. Stratified random sampling was used to divide the population into urban and rural strata and select respondents randomly from each group, thereby enhancing the representativeness of the sample. Data were

collected using a structured questionnaire based on a 5 - point Likert scale, which enabled systematic measurement of respondents' attitudes and perceptions. To analyse the data, various statistical techniques were employed: Cronbach's Alpha was used to test the reliability of the scale, factor analysis to identify underlying dimensions among variables, correlation analysis to examine relationships between variables, multiple regression analysis to assess the impact of independent variables on the dependent variable, and an independent t - test to compare mean differences between urban and rural respondents.

## RESULTS

**Table 1 : Reliability of Constructs**

Construct	Cronbach's Alpha
Price Perception	0.78
Green Trust	0.82
Awareness	0.76
Certification Credibility	0.80
Scepticism	0.74

**Table 2 : Regression Results: Urban vs. Rural**

Predictor	Urban ( $\beta$ )	Significance (p)	Rural ( $\beta$ )	Significance (p)
Price Perception	-0.18	0.12	-0.52	<0.01
Green Trust	0.61	<0.01	0.28	0.04
Awareness	0.35	<0.05	0.32	<0.05
Certification Credibility	0.48	<0.01	0.41	<0.01

**Table 3 : Urban vs. Rural Scepticism**

Group	Mean Scepticism Score	Standard Deviation	Significance (t-test)
Urban	3.85	0.61	<0.05
Rural	3.42	0.55	-

The results indicate that the measurement scales used in the study were reliable, as Cronbach's alpha values exceeded 0.70 for all constructs. Regression analysis revealed distinct patterns between urban and rural respondents. Price perception had a significant negative influence on rural purchase intention ( $\beta = -0.52$ ,  $p < 0.01$ ), suggesting that higher price sensitivity reduces the likelihood of purchase in rural areas. In contrast, green trust emerged as a strong predictor of purchase intention among urban consumers ( $\beta = 0.61$ ,  $p < 0.01$ ), highlighting the importance of trust in environmentally friendly claims in urban markets. Awareness demonstrated a moderate positive influence on purchase intention across both segments, indicating its overall relevance. Additionally, certification credibility significantly enhanced consumer trust ( $\beta = 0.48$ ), emphasizing the role of credible certifications in shaping perceptions. The findings further show that urban respondents exhibited significantly higher levels of scepticism compared to rural respondents, pointing to differences in consumer attitudes between the two groups.

## DISCUSSION

The discussion highlights clear segmentation in green consumer behaviour between rural and urban markets. The findings suggest that rural consumers are primarily constrained by affordability and limited access, making price a critical barrier to green purchase intentions. In contrast, urban consumers, despite having greater access and purchasing power, are constrained by trust deficits, particularly scepticism toward green claims. This indicates that awareness alone is insufficient in urban markets unless supported by credible and transparent information. Certification clarity emerges as a pivotal factor in addressing both challenges, as it can enhance trust among urban consumers while also justifying price perceptions for rural consumers, thereby serving as a bridge between affordability and credibility concerns across segments.

## POLICY IMPLICATIONS

The policy implications of the study suggest the need for differentiated strategies for urban and rural markets. In urban areas, policies should focus on strengthening certification transparency and

enforcing strict anti - green washing regulations to reduce consumer scepticism and build trust in green products. For rural markets, emphasis should be placed on providing subsidies, improving localized distribution networks, and conducting targeted awareness campaigns to address affordability and accessibility constraints. Across both segments, cross - cutting policies such as the harmonization of certification systems and demand aggregation initiatives can help reduce confusion, lower costs, and enhance overall consumer confidence, thereby supporting broader adoption of green products.

## CONCLUSION

Green adoption in Haryana is behaviourally segmented rather than supply - limited. Trust - building measures are essential for urban consumers, while affordability mechanisms are critical for rural adoption.

Haryana stands at a pivotal juncture in its trajectory toward sustainable consumption. The state has successfully laid the groundwork through extensive supply - side policy and incentives for organic and natural farming, providing a viable supply base (Government of India, Ministry of Agriculture & Farmers' Welfare, 2022; Government of Haryana, 2023). Concurrently, the state harbours a powerful consumer market, segmented into an affluent urban core demanding ethical, premium goods, and a large, price - sensitive rural population seeking basic health and economic efficiency (Rani, 2024; IJSDR, 2024).

Future success is contingent upon resolving the market's internal conflicts. In the urban segment, the priority must be addressing the trust deficit caused by skepticism and green washing through mandatory transparency and a simplified, credible certification mark (Nag & Shailesh, 2025; Outlook Business / ASCI, 2025). In the rural segment, the strategic focus must shift to mitigating affordability and access barriers through logistical infrastructure development, the incentivization of value - focused

SKUs, and the structural integration of producer subsidies to ensure tangible price reduction for the end - consumer (IJSDR, 2024; Mohanty, 2013; Rani, 2024).

By adopting these differential marketing strategies and ensuring the effective translation of policy support into stable, accessible, and affordable retail options, Haryana can successfully transform its bifurcated green market into a resilient and inclusive model of sustainable consumption, maximizing both environmental benefit and economic opportunity across its diverse regions (Smith, 2020; Gupta & Sharma, 2021; Ministry of Environment, 2019).

## REFERENCES

- AEEE. (2024). Increasing energy access by using super - efficient appliances in rural homes and productive businesses – India stakeholder mapping report. Alliance for an Energy Efficient Economy.
- Business Standard/India. (2024). Rural, urban consumption inequality dips during Aug 2023 – July 2024: Govt survey. Indian Express / Business Standard / MoSPI data. – As cited in Rani, Sandeep & Kalkal (2024).
- CEEW & IRES. (2020). Awareness and adoption of energy - efficient appliances in Indian homes. Council on Energy, Environment and Water.
- Chen, Y. S., & Chang, C. H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. *Journal of Business Ethics*, 114 (3), 489 – 500. <https://doi.org/10.1007/s10551-012-1360-0>
- D'Souza, C., Taghian, M., & Lamb, P. (2006). An empirical study on the influence of environmental labels on consumers. *Corporate Communications: An International Journal*, 11 (2), 162 – 173. <https://doi.org/10.1108/13563280610664500>
- Delmas, M. A., & Burbano, V. C. (2011). The drivers of green washing. *California Management Review*, 54 (1), 64 – 87. <https://doi.org/10.1525/cm.2011.54.1.64>

- DHBVN (Dakshin Haryana Bijli Vitran Nigam). (2024). Energy conservation fairs and consumer awareness programs. <https://dhbvn.org.in/energy-fairs>
- Dua, K. (2024). Consumer awareness towards green products: a study of rural women in Haryana. *International Journal of Agriculture Extension and Social Development*, 7 (11), 252 - 261.
- Government of India, Ministry of Agriculture & Farmers' Welfare. (2022). Paramparagat Krishi Vikas Yojana (PKVY). <https://agricoop.nic.in/paramparagat-krishi-vikas-yojana-pkvy>
- Gupta, R., & Sharma, P. (2021). Sustainable markets and regional economic development: Case studies from India. New Delhi: Academic Press.
- Gupta, V., Sarkar, A., Deb, C., & Jana, A. (2025). Evaluating energy inefficiency in energy-poor households in India: A frontier analysis approach.
- Haryana Department of Animal Husbandry. (2023). Subsidy for indigenous cows under natural farming initiatives. [https://ahd.haryana.gov.in/natural-farming-subsidies?utm\\_source=chatgpt.com](https://ahd.haryana.gov.in/natural-farming-subsidies?utm_source=chatgpt.com)
- Haryana State Action Plan on Climate Change. (2017). State Action Plan on Climate Change – Haryana. Government of Haryana.
- Horticulture India. (2023). India International Horticulture Market (IHM), Sonapat: Integrating farmers into high-demand supply chains. [https://horticultureindia.com/ihm-sonapat-integration?utm\\_source=chatgpt.com](https://horticultureindia.com/ihm-sonapat-integration?utm_source=chatgpt.com)
- IEA. (2013). Scheme on Energy Conservation in Agriculture Sector in Haryana. International Energy Agency.
- IJIRT. (2025). Opportunities for Energy-Efficient and Smart Appliances: Challenges for rural distribution. *International Journal of Innovative Research in Technology*, 12 (2). – describes infrastructural, logistical, and last-mile distribution constraints for energy-efficient appliances in rural/semi-urban areas.
- International Institute for Sustainable Development (IISD). (2025). Combatting Green washing: India's new guidelines on green claims.
- Jain, A., et al. (2023). From awareness to adoption: stakeholder perceptions of solar lights among marginalized communities in rural India. *Energy Research & Social Science*, 126, 104129.
- Journal of Marketing & Social Research (JMSR). (2025). rural consumer behaviour in developing economies: a review of social and marketing interventions. JMSR.
- Khattari, V., & Tomar, V. S. (2024). Does Green washing build green brand associations? Evidence from the Indian packaged food market. *Indian Journal of Marketing*.
- Market Research India. (2024). Indian organic fruits and vegetables market forecast 2024 - 2030. Market Research India Reports. [https://www.marketresearchindia.com/organic-fruits-vegetables-growth-forecast-2024-2030?utm\\_source=chatgpt.com](https://www.marketresearchindia.com/organic-fruits-vegetables-growth-forecast-2024-2030?utm_source=chatgpt.com)
- Ministry of Environment, Forest and Climate Change. (2019). National policy on sustainable consumption. Government of India. <https://moef.gov.in>
- Nag, A., & Chowdhary, R. (2019). Adoption and diffusion of solar products in Indore: A study on barriers for non-adoption of solar energy systems in domestic households. *Prabandhan: Indian Journal of Management*, 12 (3), 24 - 37. <https://doi.org/10.17010/pijom/2019/v12i3/142338>
- Nath, V., & Agrawal, R. (2022). Barriers to consumer adoption of sustainable products - an empirical analysis. *Social Responsibility Journal*, 19 (3).
- NewsDrum. (2025). Natural farming, water budgeting part of climate action plan for Haryana.
- Parguel, B., Benoît - Moreau, F., & Larceneux, F. (2011). How sustainability ratings might deter 'green washing': A closer look at ethical corporate communication. *Journal of Business Ethics*, 102, 15 - 28. <https://doi.org/10.1007/s10551-011-0830-1>
- PM, S., Nair, A., Gupta, A., & Garg, G. (2025). Assessing green consumer behaviour: The impact of premium pricing on eco-friendly

- product adoption. *International Journal of Environmental Sciences*, 11 (9s), 631 – 638.
- Rani, S., Sandeep, & Kalkal, S. (2024). Geographical analysis of rural - urban disparities in housing conditions in Haryana: A spatial perspective. *National Geographical Journal of India*, 70 (1).
- Renewable Watch. (2024). a positive shift: Haryana adopts progressive policies for renewables growth.
- Renewable Watch. (2025). making a shift: Key initiatives in Haryana and Maharashtra.
- Shah, M., & Asha. (2023). A study on the perception of consumers towards eco - friendly household products. *International Journal of Advanced Research and Multidisciplinary Trends*.
- Singh, R., & Verma, D. (2023). Barriers to green product adoption in rural India: Evidence from consumer perception studies. *Journal of Rural and Community Development*, 18 (2), 44 – 59.
- Smith, J. (2020). *Green marketing strategies for emerging economies*. London: Routledge.
- SN Business & Economics. (2025). Eco - friendly or eco - fraud? The role of green washing in consumer behaviour.
- Waray, S., Patnaik, S., & Jain, A. (2018). Clean energy innovations to boost rural incomes. Council on Energy, Environment and Water.
- Yadav, R., & Pathak, G. S. (2017). Determinants of consumers' green purchase behaviour in a developing nation: Applying and extending the theory of planned behaviour. *Ecological Economics*, 134, 114 – 122. <https://doi.org/10.1016/j.ecolecon.2016.12.019>