



CHAPTER 8: REFERENCES

- Aenis, T., Wang, J., & Hofmann-Souki, Susanne & Svart-Gröger, Sophie. (2018). Farmers' willingness to accept land-use changes in Xishuangbanna, China. 10.18452/19414.
- Agbenyo, W., Jiang, Y., Ding, Z., Titriku, J. K., & Ntim-Amo, G. (2022). Impact of Climate Change on Cocoa Production in Africa: An Approach of Cross-sectional ARDL. International Journal of Environmental Research, 16(5). <http://dx.doi.org/10.1007/s41742-022-00471-0>
- Amerino, J., Apedo, C. K., Anang, B. T., & Lin, C. (2024). Factors influencing adoption of cocoa agroforestry in Ghana: Analysis based on tree density choice. Sustainable Environment, 10(1). <https://doi.org/10.1080/27658511.2023.2296162>
- Alemagi, D., Duguma, L., Minang, P. A., Nkeumoe, F., Feudjio, M., & Tchoundjeu, Z. (2015). Intensification of cocoa agroforestry systems as a REDD+ strategy in Cameroon: hurdles, motivations, and challenges. International Journal of Agricultural Sustainability, 13(3), 187–203. <https://doi.org/10.1080/14735903.2014.940705>
- Ariningsih, E., Purba, H. J., Sinuraya, J. F., Suharyono, S., & Septanti, K. S. (2019). Kinerja industri kakao di Indonesia. In Forum Penelitian Agro Ekonomi (Vol. 37, No. 1, pp. 1-23).
- Asare, R., & David, S. (2010). Planting, replanting and tree diversification in cocoa systems-learning about sustainable cocoa production: a guide for participatory farmer training. Forest and Landscape Denmark.
- AtSource. (n.d.). INCENTIVISING COCOA FARMERS TO PROTECT AND RESTORE FOREST. AtSource. Retrieved January 12, 2024, from <https://www.atsource.io/impact/incentivising-cocoa-farmers-to-protect-and-restore-forest-ghana.html>
- Badan Pusat Statistik (BPS). (2022). Kabupaten Polewali mandar Dalam Angka 2022. xlvi+312. Departemen Industri. Gambaran Sekilas Industri Kakao
- Badrie, N., Bekele, F., Sikora, E., & Sikora, M. (2015). Cocoa agronomy, quality, nutritional, and health aspects. Critical reviews in food science and nutrition, 55(5), 620–659. <https://doi.org/10.1080/10408398.2012.669428>
- Barry Callebaut. (n.d.). *Forever Chocolate Progress Report 2022-23 Barry Callebaut*. Barry Callebaut. Retrieved May 12, 2024, from https://www.barry-callebaut.com/system/files/2024-01/Forever%20Chocolate%20Progress%20Report%202022-23%20Barry%20Callebaut_1.pdf



- Basu, S., Nagendra, H., Verburg, P., & Plieninger, T. (2024). Perceptions of ecosystem services and knowledge of sustainable development goals around community and private wetlands users in a rapidly growing city. *Landscape and Urban Planning*, 244, 104989. <https://doi.org/10.1016/j.landurbplan.2023.104989>
- Bell, E., Bryman, A., & Harley, B. (2019). *Business Research Methods*. Oxford University Press.
- Bhalla, S., Bahar, N., & Kanapathy, K. (2023). Pre-testing Semi-structured Interview Questions Using Expert Review and Cognitive Interview Methods. *International Journal of Business and Management*. 7. 11-19. [10.26666/rmp.ijbm.2023.5.2](https://doi.org/10.26666/rmp.ijbm.2023.5.2).
- Blaser-Hart, W. J., Hart, S. P., Oppong, J., Kyereh, D., Yeboah, E., & Six, J. (2021). The effectiveness of cocoa agroforests depends on shade-tree canopy height. *Agriculture, Ecosystems and Environment*, 322. <https://doi.org/10.1016/j.agee.2021.107676>
- Bredemeier, B., Herrmann, S., Sattler, C., Prager, K., Van Bussel, L. G., & Rex, J. (2022). Insights into innovative contract design to improve the integration of biodiversity and ecosystem services in agricultural management. *Ecosystem Services*, 55, 101430. <https://doi.org/10.1016/j.ecoser.2022.101430>
- Budhi, G. S., Kuswanto, S. A., & Iqbal, M. (2008). Concept and implementation of PES program in the Cidanau watershed: a lesson learned for future environmental policy. *Analisis Kebijakan Pertanian*, 6(1), 37-55.
- Burton, R. (2004). Reconceptualising the 'behavioural approach' in agricultural studies: A socio-psychological perspective. *Journal of Rural Studies*. 20. 359-371. [10.1016/j.jrurstud.2003.12.001](https://doi.org/10.1016/j.jrurstud.2003.12.001).
- Chapman, J., Dean, M., Ortoleva, P., Snowberg, E., & Camerer, C. F. (2023). Willingness to Accept, Willingness to Pay, and Loss Aversion. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4320584>.
- Cilas, C. and Bastide, P. (2020). Challenges to Cocoa Production in the Face of Climate Change and the Spread of Pests and Diseases. *Agronomy* 10, no. 9: 1232. <https://doi.org/10.3390/agronomy10091232>.
- Cooper, H. M. (1988). The Structure of Knowledge Synthesis. *Knowledge in Society*, 1: 104-126.
- Creswell J. W. (2014). *Research design: Qualitative, quantitative, and mixed method approaches* (4th ed.). SAGE Publications.
- Cypress, B. S. (2017). Rigor or Reliability and Validity in Qualitative Research: Perspectives, Strategies, Reconceptualization, and Recommendations. *Dimensions of Critical Care Nursing*, 36(4), 253–263.



<https://doi.org/10.1097/dcc.0000000000000253>

Danial, D., Fiana, Y., Handayani, F., & Hidayanto, M. (2015). Peningkatan produksi dan mutu kakao melalui kegiatan Gernas di Kalimantan Timur. Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia, 1(5).

Directorate of Food Crops, Horticulture, and Estate Crops Statistics (Ed.). (2023). Indonesia Cocoa Statistics (Vol. 7). BPS-Statistics Indonesia.

Dirjen Perkebunan. (2012). Pedoman Teknis Gerakan Nasional Peningkatan Produksi dan Mutu Kakao Tahun 2013. Kementerian Pertanian. Jakarta (ID).

del Águila, I., & del Sagrado, J. (2023). Salience-based stakeholder selection to maintain stakeholder coverage in solving the next release problem. *Information and Software Technology*, 160, 107231. <https://doi.org/10.1016/j.infsof.2023.107231>

Dolczewski, M. (2022). Semi-structured interview for self-esteem regulation research. *Acta Psychologica*, 228, 103642. <https://doi.org/10.1016/j.actpsy.2022.103642>

Downing, T., Olago, D., & Nyumba, T. (2023). Perceptions of Ecosystem Services and Climate Change in the Communities Surrounding Mt. Kenya and Mt. Elgon, Kenya. *Sustainability*, 15(14), 11470. <https://doi.org/10.3390/su151411470>

Eesley, C. and Lenox, M. J. (2006). Firm Responses to Secondary Stakeholder Action. *Strategic Management Journal* 27, 765–781.

Engel, S., Pagiola, S., & Wunder, S. (2008). Designing payments for environmental services in theory and practice: An overview of the issues. *Ecological Economics*, 65(4), 663–674. <https://doi.org/10.1016/j.ecolecon.2008.03.011>

Etzioni, A. 1964. Modern organizations. Englewood Cliffs, NJ: Prentice-Hall.

FAOSTAT (Food and Agriculture Organization of the United Nations Statistics Division).2013a. Production Statistics: Crops. Available at: <<http://faostat3.fao.org/browse/Q/QC/E>>

FAO. (2020). Emissions due to agriculture. Global, regional, and country trends 2000–2018. FAOSTAT Analytical Brief Series No 18. Rome

Field, B. C., Field, M. K.. (2016). Environmental economics an Introduction (ed. 7). New York: McGraw-Hill Education.

Forest Digest. (2023). Apa Itu IAD Perhutanan Sosial. *Forest Digest*.

<https://www.forestdigest.com/detail/2157/iad-perhutanan-sosial>

Francois, M., Pontes, M. C. G., Lima da Silva, A., & Mariano-Neto, E. (2023). Impacts of cacao agroforestry systems on climate change, soil conservation, and water resources: a review. *Water Policy*, 25(6), 564–581. <https://doi.org/10.2166/wp.2023.164>

Freeman, R. E. (2010). Strategic management: A stakeholder approach. Cambridge



university press.

Fripp, E. (2014). Payments for Ecosystem Services (PES): A practical guide to assessing the feasibility of PES projects. Bogor, Indonesia: CIFOR.

Garrity, D. P., Akinnifesi, F. K., Ajayi, O. C., Weldesemayat, S. G., Mowo, J. G., Kalinganire, A., ... & Bayala, J. (2010). Evergreen Agriculture: a robust approach to sustainable food security in Africa. *Food security*, 2, 197-214. <https://doi.org/10.1007/s12571-010-0070-7>

Gautam, V., & Gautam, J. (2023). Qualitative Research Approaches in Social Sciences. 10.5281/zenodo.10428693.

Georgantzís, N., & Navarro-Martínez, D. (2010). Understanding the WTA–WTP gap: Attitudes, feelings, uncertainty and personality. *Journal of Economic Psychology*, 31(6), 895–907. <https://doi.org/10.1016/j.jeop.2010.07.004>

Ghosh-Jerath, S., Kapoor, R., Ghosh, U., Singh, A., Downs, S., & Fanzo, J. (2021). Pathways of Climate Change Impact on Agroforestry, Food Consumption Pattern, and Dietary Diversity Among Indigenous Subsistence Farmers of Sauria Paharia Tribal Community of India: A Mixed Methods Study. *Frontiers in Sustainable Food Systems*, 5. <https://doi.org/10.3389/fsufs.2021.667297>

Grant, M. K., Yifeng, Z., Brenya, R., Obuobi, B., & Bempah, G. B. (2022). Limitations of Sustainable Cocoa Agroforestry: A Literature Review. *Journal of Agroforestry and Environment*, 15(2), 38–51.

Hanum, S.S. (2018). Faktor-faktor yang memengaruhi alih fungsi lahan kakao menjadi kelapa sawit di Kabupaten Asahan Sumatera Utara [Skripsi]. [Bogor (ID)]: Institut Pertanian Bogor.

Hartartri DFS. (2015). Penanganan pascapanen dan pemasaran kakao di Kabupaten Blitar, Jawa Timur. *Warta Puslitkoka*. 27(2):37-41.

Hastuty, S. (2017). Identifikasi faktor pendorong alih fungsi lahan pertanian. Prosiding Seminar Nasional. 3(1):253-257.

Hoffman, E., & Spitzer, M. L. (1993). Willingness to pay vs. willingness to accept: legal and economic implications. Wash. ULQ, 71, 59.

Iiyama, M., Neufeldt, H., Dobie, P., Njenga, M., Ndegwa, G., & Jamnadass, R. (2014). The potential of agroforestry in the provision of sustainable woodfuel in sub-Saharan Africa. *Current Opinion in Environmental Sustainability*, 6, 138-147. <https://doi.org/10.1016/j.cosust.2013.12.003>

Indonesia Government. (2017). Government Regulation of the Republic of Indonesia Number 46 of 2017 concerning Environmental Economic Instruments. State Gazette of the Republic of Indonesia of 2017 Number 228. Jakarta



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Indonesia Investment. (n.d.). *Cocoa in Indonesia - Indonesian Production & Export.*

Indonesia Investments. Retrieved March 10, 2024, from <https://www.indonesia-investments.com/business/commodities/cocoa/item241>

Jaimes-Suárez, Y. Y., Carvajal-Rivera, A. S., Galvis-Neira, D. A., Carvalho, F. E. L., & Rojas-Molina, J. (2022). Cacao agroforestry systems beyond the stigmas: Biotic and abiotic stress incidence impact. *Frontiers in Plant Science*, 13. <https://doi.org/10.3389/fpls.2022.921469>

Jones, K. W., Powlen, K., Roberts, R., & Shinbrot, X. (2020). Participation in payments for ecosystem services programs in the Global South: A systematic review. *Ecosystem Services*, 45, 101159. <https://doi.org/10.1016/j.ecoser.2020.101159>

Kaba, J. S., Otu-Nyanteh, A., & Abunyewa, A. A. (2020). The role of shade trees in influencing farmers' adoption of cocoa agroforestry systems: Insight from semi-deciduous rain forest agroecological zone of Ghana. *NJAS: Wageningen Journal of Life Sciences*, 92(1), 1–7. <https://doi.org/10.1016/j.njas.2020.100332>

Kahneman, D., Ritov, I., Jacowitz, K. E., & Grant, P. (1993). Stated Willingness to Pay for Public Goods: A Psychological Perspective. *Psychological Science*, 4(5), 310-315. <https://doi.org/10.1111/j.1467-9280.1993.tb00570.x>

Kuhfuss, L., Rivington, M., & Roberts, M. (2018). *The 'Payment for Ecosystem Services' approach - relevance to climate change | Climate XChange*. ClimateXChange. Retrieved March 13, 2024, from <https://www.climateexchange.org.uk/projects/the-payment-for-ecosystem-services-approach-relevance-to-climate-change/>

Landell-Mills, N., Porras, I. T., & Development, I. I. F. E. A. (2002). Silver bullet or fools' gold : a global review of markets for forest environmental services and their impact on the poor ; a research report prepared by the International Institute for Environment and Development (IIED), London.

Langer, K., Decker, T., Roosen, J., & Menrad, K. (2016). A qualitative analysis to understand the acceptance of wind energy in Bavaria. *Renewable and Sustainable Energy Reviews*, 64, 248–259. <https://doi.org/10.1016/j.rser.2016.05.084>

Langer, K., Decker, T., Roosen, J., & Menrad, K. (2018). Factors influencing citizens' acceptance and non-acceptance of wind energy in Germany. *Journal of Cleaner Production*, 175, 133–144. <https://doi.org/10.1016/j.jclepro.2017.11.221>

Leech, B. (2002). Asking questions: techniques for semistructured interviews. *Political Science and Politics* 35 (4):665-668.

Leimona, B., Amaruzaman, S., & Tanika, L. (2019). "Sistem Pembayaran Jasa Lingkungan Hidup," USAID-Bangun Indonesia untuk Jaga Alam Demi



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Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Keberlanjutan (BIJAK). [Online]. Available:

https://pdf.usaid.gov/pdf_docs/PA00XG2J.pdf

Leimona, B., Joshi, L., & van Noordwijk, M. (2009). Can rewards for environmental services benefit the poor? Lessons from Asia. *International Journal of the Commons*, 3(1), 82–107. <https://www.jstor.org/stable/26522999>

Leung L. (2015). Validity, reliability, and generalizability in qualitative research. *Journal of family medicine and primary care*, 4(3), 324–327. <https://doi.org/10.4103/2249-4863.161306>

Lima, F. P., & Bastos, R. P. (2019, December). Perceiving the invisible: Formal education affects the perception of ecosystem services provided by native areas. *Ecosystem Services*, 40, 101029. <https://doi.org/10.1016/j.ecoser.2019.101029>

Locke, E. A. (2007). The Case for Inductive Theory Building. *Journal of Management*, 33(6), 867–890. <https://doi.org/10.1177/0149206307307636>

Mack, E. A., Akamagwuna, F. C., Murata, C., Materechera-Mitochi, F., Nnadozie, C. F., & Odume, O. N. (2024, January 17). Perceptions and knowledge of ecosystem services in urban river systems, Eastern Cape, South Africa. <https://doi.org/10.21203/rs.3.rs-3856996/v1>

Makee, L. A. (2016). On-farm Tree Planting and Management Guidelines for Medium to High Potential Areas of Kenya. *Journal of Forest and Environmental Science*, 32(4), 392–399. <https://doi.org/10.7747/JFES.2016.32.4.392>

Managanta AA, Sumardjo, Sadono D, Tjitropranoto P. (2019). Faktor-faktor yang berpengaruh terhadap kompetensi petani kakao di Provinsi Sulawesi Tengah. *J Penyul*. 15(1):120-133.

Matzdorf, B., Sattler, C., & Engel, S. (2013). Institutional frameworks and governance structures of PES schemes. *Forest Policy and Economics*, 37, 57–64. <https://doi.org/10.1016/j.forpol.2013.10.002>

Meyfroidt, P. (2018). Trade-offs between environment and livelihoods: Bridging the global land use and food security discussions. *Global Food Security*, 16, 9–16. <https://doi.org/10.1016/j.gfs.2017.08.001>

Milgroom, J., Giller, K. E., & Leeuwis, C. (2014). Three Interwoven Dimensions of Natural Resource Use: Quantity, Quality and Access in the Great Limpopo Transfrontier Conservation Area. *Human Ecology*, 42(2), 199–215. <https://doi.org/10.1007/s10745-013-9635-3>

Minang, P. A., van Noordwijk, M., Duguma, L. A., Alemagi, D., Do, T. H., Bernard, F., Agung, P., Robiglio, V., Catacutan, D., Suyanto, S., Armas, A., Silva Aguad, C., Feudjio, M., Galudra, G., Maryani, R., White, D., Widayati, A., Kahurani, E.,



Namirembe, S., & Leimona, B. (2014). REDD+ Readiness progress across countries: time for reconsideration. *Climate Policy*, 14(6), 685–708. <https://doi.org/10.1080/14693062.2014.905822>

Ministry of Agriculture the Republic of Indonesia. (2013). *Indonesia Cocoa Catalogue* (Ministry of Agriculture Republic of Indonesia, Compiler) [Perpustakaan Sekretariat Jenderal Kementerian Pertanian].

Maharani C, Siregar EB, Siregar MA. (2013). Analisis pengembangan perkebunan kakao rakyat di Kabupaten Deli Serdang Provinsi Sumatera Utara. *Agrica*. 6(1):71-84.

Mitchell, B. R. (2007). International Historical Statistics: Africa, Asia and Oceania, 1750–2005, 6th ed. Basingstoke: Palgrave Macmillan.

Mitchell, B. R. (2007). International Historical Statistics: Europe 1750–2005, 6th ed. Basingstoke: Palgrave Macmillan.

Mitchell, B. R. (2007). International Historical Statistics: The Americas, 1750–2005, 6th ed. Basingstoke: Palgrave Macmillan.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *The Academy of Management Review*, 22(4), 853. <https://doi.org/10.2307/259247>

Mitchell, R. K., & Lee, J. H. (2019). Stakeholder Identification and Its Importance in the Value Creating System of Stakeholder Work. *The Cambridge Handbook of Stakeholder Theory*, 53–74. <https://doi.org/10.1017/9781108123495.004>

Murniati, M., Suharti, S., Yeny, I., & Minarningsih, M. (2022). Cacao-based Agroforestry in Conservation Forest Area: Farmer Participation, Main Commodities and Its Contribution to the Local Production and Economy. *Forest and Society*, 6(1), 243–274. <https://doi.org/10.24259/fs.v6i1.13991>

Vermeulen, S. (2007). Fair deals for watershed services in Indonesia (No. 9). IIED.

Neilson, J., Dwiartama, A., Fold, N., & Permati, D. (2020). Resource-based industrial policy in an era of global production networks: Strategic coupling in the Indonesian cocoa sector. *World Development*, 135, 105045. <https://doi.org/10.1016/j.worlddev.2020.105045>

Niether, W., Schneidewind, U., Fuchs, M., Schneider, M., & Armengot, L. (2019). Below- and aboveground production in cocoa monocultures and agroforestry systems. *Science of the Total Environment*, 657, 558–567. <https://doi.org/10.1016/j.scitotenv.2018.12.050>

Nola, R. & Sankey, H. (2007). Theories of scientific method. Stocksfield: Acumen.

Novasari, D., Wulandari, C., Harianto, S. P., Gumay Febryano, I., Bakri, S., & Kaskoyo,



- H. (2023). Community preferences for agroforestry patterns in supporting future forestry development. IOP Conference Series: Earth and Environmental Science, 1133(1), 012066. <https://doi.org/10.1088/1755-1315/1133/1/012066>
- Oduro, K. A., Arts, B., Kyereh, B., & Mohren, G. (2018). Farmers' Motivations to Plant and Manage On-Farm Trees in Ghana. Small-Scale Forestry, 17(3), 393–410. <https://doi.org/10.1007/s11842-018-9394-5>
- Olson, K. (2016). Essentials of qualitative interviewing. Routledge.
- Owusu, V., Akoto-Adjepong, V., Acheampong, E., & Barnes, V. R. (2021, February 26). Farmer Perceptions and Economic Performance of Cocoa Agroforestry Shade Levels in Ghana. Journal of Sustainable Forestry, 41(10), 922–940. <https://doi.org/10.1080/10549811.2021.1883444>
- Pagiola, S., & Platais, G. (2006). Payments for environmental services: from theory to practice.
- Pasuruan Regency. (2023). Pasuruan Regent Regulation No. 224 of 2023 on Environmental Service Payment System. Pasuruan Regency: Pasuruan.
- Petruzzello, M. (2023, November 17). monoculture. Encyclopedia Britannica. <https://www.britannica.com/topic/monoculture>
- Pohlan, H. A. J., & Pérez, V. D. (2010). Growth and production of cacao, soils, plant growth and crop production. Encyclopedia of life support systems (EOLSS), developed under the auspices of the UNESCO. Oxford, UK: Eolss Publishers.
- Polewali Mandar Regency. (2022). Polewali Mandar Regent Regulation No. 10 of 2022 on District Investment General Plan Year 2022-2025. Polewali Mandar Regency: Polewali Mandar.
- Porras, I., Barton, D. N., Miranda, M., & Chacón-Cascante, A. (2013). Learning from 20 years of Payments for Ecosystem Services in Costa Rica. International Institute for Environment and Development, London.
- Potter, L. (2001). Agricultural Intensification in Indonesia: Outside Pressures and Indigenous Strategies. Asia Pacific Viewpoint, 42(2–3), 305–324. <https://doi.org/10.1111/1467-8373.00151>
- Poudyal, B., Upadhyaya, S., Acharya, S. R., & Chhetri, B. B. K. (2021). Assessing Socio-Economic Factors Affecting the Implementation of Payment for Ecosystem Services (PES) Mechanism. World. <https://doi.org/10.3390/world2010006>
- Power, A. G. (2010). Ecosystem services and agriculture: tradeoffs and synergies. Phil. Trans. R. Soc. B 365: 2959–2971. <http://doi.org/10.1098/rstb.2010.0143>
- Prabawani, B., Hadi, S. P., Fisher, M. R., Warsono, H., Dewi, R. S., & Ainuddin, I.



(2024). Socioeconomic perspective of agroforestry development in Central Java. *Environmental and Sustainability Indicators*, 22, 100354. <https://doi.org/10.1016/j.indic.2024.100354>

Priya, A. (2020). Case Study Methodology of Qualitative Research: Key Attributes and Navigating the Conundrums in Its Application. *Sociological Bulletin*, 70(1), 94–110. <https://doi.org/10.1177/0038022920970318>

Quainoo-Mensah, F., Afele, J. T., & Gorleku, D. O. (2023). Cocoa agroforestry systems and yield dynamics within the Offinso Municipality of Ghana. *Pelita Perkebunan (a Coffee and Cocoa Research Journal)*, 39(2), 129–140. <https://doi.org/10.22302/iccri.jur.pelitaperkebunan.v39i2.553>

Quintas-Soriano, C., Brandt, J. S., Running, K., Baxter, C. V., Gibson, D. M., Narducci, J., & Castro, A. J. (2018). Social-ecological systems influence ecosystem service perception: a Programme on Ecosystem Change and Society (PECS) analysis. *Ecology and Society*, 23(3). <https://doi.org/10.5751/es-10226-230303>

Rajagukguk, P., Sribudiani, E., & Mardhiansyah, M. (2015). KONTRIBUSI AGROFORESTRI TERHADAP PENDAPATAN RUMAH TANGGA PETANI (Studi Kasus: Desa Janji Raja, Kecamatan Sitiotio, Kabupaten Samosir, Sumatera Utara). *Jom Faperta*, 2 (2), pp. 1-12.

Ramos, A., Jujnovsky, J., & Almeida-Leñero, L. (2018). The relevance of stakeholders' perceptions of ecosystem services in a rural-urban watershed in Mexico City. *Ecosystem Services*, 34, 85–95. <https://doi.org/10.1016/j.ecoser.2018.10.003>

Rocha, V. (2021). From theory to analysis: An introduction to using semi-structured individual interviews in political science.

Rogers, E.M. (2003). The diffusion of Innovations. 5th Edition. The Free Press, New York

Roy, P., Nei, D., Orikasa, T., Xu, Q., Okadome, H., Nakamura, N., & Shiina, T. (2009). A review of life cycle assessment (LCA) on some food products. *Journal of food engineering*, 90(1), 1-10. <https://doi.org/10.1016/j.jfoodeng.2008.06.016>

Ruf, Francois, Pierre Ehret, and Yoddang. (1996). Smallholder Cocoa in Indonesia: Why a Cocoa Boom in Sulawesi? In *Cocoa Pioneer Fronts Since 1800: The Role of Smallholders, Planters and Merchants*, edited by Clarence-Smith. London: MacMillan.

Ryan, G. W., & Bernard, H. R. (2003). Techniques to Identify Themes. *Field Methods*, 15(1), 85–109. <https://doi.org/10.1177/1525822x02239569>

Salancik, G. R., & Pfeffer, J. 1974. The bases and use of power in organizational decision-making: The case of universities. *Administrative Science Quarterly*, 19: 453-473.

Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business Cases for Sustainability:



A Stakeholder Theory Perspective. *Organization & Environment*, 32(3), 191-212.

<https://doi.org/10.1177/1086026617722882>

Schindler, P. S., & Cooper, D. R. (2019). *Business research methods* (Thirteen edition). McGraw-Hill Education.

Schomers, S., & Matzdorf, B. (2013, December). Payments for ecosystem services: A review and comparison of developing and industrialized countries. *Ecosystem Services*, 6, 16–30. <https://doi.org/10.1016/j.ecoser.2013.01.002>

Scudder, M., Wampe, N., Waviki, Z., Applegate, G., & Herbohn, J. (2022). Smallholder cocoa agroforestry systems; is increased yield worth the labour and capital inputs? *Agricultural Systems*, 196. <https://doi.org/10.1016/j.agsy.2021.103350>

Setiawati, S. (2024). Harga Kakao Terbang 104%, RI Dapat Untung Apa Buntung? *CNBC Indonesia*.

<https://www.cnbcindonesia.com/research/20240322110920-128-524401/harga-kakao-terbang-104-ri-dapat-untung-apa-buntung>

Smith, S., Rowcroft, P., Everard, M., Couldrick, L., Reed, M., Rogers, H., Quick, T., Eves, C. and White, C. (2013). *Payments for Ecosystem Services: A Best Practice Guide*. Defra, London.

Squicciarini, M. P., & Swinnen, J. F. M. (2016). *The Economics of Chocolate*. Oxford University Press.

[http://books.google.ie/books?id=GT AiCwAAQBAJ&pg=PR4&dq=978%E2%80%930%E2%80%9319%E2%80%93872644%E2%80%939&hl=&cd=1&source=gbs_api](http://books.google.ie/books?id=GTAiCwAAQBAJ&pg=PR4&dq=978%E2%80%930%E2%80%9319%E2%80%93872644%E2%80%939&hl=&cd=1&source=gbs_api)

Statista Research Department. (2023). Agriculture in Indonesia - statistics & facts. Statista. Retrieved January 11, 2024, from <https://www.statista.com/topics/7732/agriculture-industry-in-indonesia/#topicOverview>

STATISTA. (2023). Indonesia: cocoa bean production 2023. Statista. Retrieved October 10, 2023, from <https://www.statista.com/statistics/497882/production-of-cocoa-beans-in-indonesia/>

Statista. (2023). Indonesia: greenhouse gas emissions by sector. Statista. Retrieved January 12, 2024, from <https://www.statista.com/statistics/1084695/indonesia-greenhouse-gas-emissions-by-sector/>

Stockdale, E., Shepherd, M., Fortune, S., & Cuttle, S. (2002). Soil fertility in organic farming systems – fundamentally different? *Soil Use and Management*, 18(s1),



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GADJAH MADA

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301–308. <https://doi.org/10.1111/j.1475-2743.2002.tb00272.x>

Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches.

The Academy of Management Review, 20(3), 571.
<https://doi.org/10.2307/258788>

Suich, H., Lugina, M., Muttaqin, M. Z., Alviya, I., & Sari, G. K. (2016). Payments for ecosystem services in Indonesia. Oryx, 51(3), 489–497.
<https://doi.org/10.1017/S0030605316000259>

Supriatna, S., Hashilah, F., Mukhtar, M. K., & Wardani, K. K. (2022). Determinant of Land Use Change in South Kalimantan: An Evidence from Banjarbaru City and Banjar Regency. Forest and Society, 6(1), 422–435.

Suryana, A.T., Fariyanti A., Rifin A. (2014). Analisis perdagangan kakao Indonesia di pasar internasional. J Tanam Industri Penyegar. 1(1):29-40.

Swann, E., & Richards, R. (2016). What factors influence the effectiveness of financial incentives on long-term natural resource management practice change? Evidence Base, 2016(2), 1–32. <https://doi.org/10.21307/eb-2016-003>

Temegne, N. C., Tsoata, E., Nana, A. S., Ngome, A. F., Agendia, A. P., & Youmbi, E. (2024). Agroforestry and agriculture intensification. In Elsevier eBooks (pp. 33–50). <https://doi.org/10.1016/b978-0-323-95393-1.00010-5>

Tennhardt, L., Lazzarini, G., Weisshaidinger, R., & Schader, C. (2022). Do environmentally-friendly cocoa farms yield social and economic co-benefits? Ecological Economics, 197, 107428.
<https://doi.org/10.1016/j.ecolecon.2022.107428>

The Economist. (2024). Why chocolate is becoming much more expensive. *The Economist*.

<https://www.economist.com/graphic-detail/2024/02/28/why-chocolate-is-becoming-much-more-expensive>

The International Cocoa Organization (ICCO). (n.d.). *Growing Cocoa*. International Cocoa Organization. Retrieved March 8, 2024, from <https://www.icco.org/growing-cocoa/>

Thompson, B. S., & Friess, D. A. (2019). Stakeholder preferences for payments for ecosystem services (PES) versus other environmental management approaches for mangrove forests. Journal of Environmental Management, 233, 636–648.
<https://doi.org/10.1016/j.jenvman.2018.12.032>

Tsibulnikova, M. R. (2012). Mainstreaming natural capital and ecosystem services into management decisions. Tomsk State University Journal, (360), 193-199.

Ugwu, C., & Eze, V. (2023). Qualitative Research. 8. 20-35.



- Van der San, I. (2004). "Assessing the Use of Environmental Service Payments as a Potential Adaptation Strategy to Climate Change in the Cidanau Watershed", Banten, Indonesia. Unpublished Master Thesis. Department of Environmental Science and Technology, Imperial College London, Faculty of Life Science, University of London.
- Van Hecken, G., & Bastiaensen, J. (2010, December). Payments for ecosystem services: justified or not? A political view. *Environmental Science & Policy*, 13(8), 785–792. <https://doi.org/10.1016/j.jclepro.2015.08.102>
- Voora, V., Bermúdez, S., & Larrea, C. (2019). Global market report: Cocoa (p. 12). Winnipeg, MB, Canada: International Institute for Sustainable Development.
- Wahyudi T, Panggabean TR, Pujianto. (2009). Panduan lengkap kakao, manajemen agribisnis dari hulu hingga hilir. Cet ke-2. Jakarta (ID): Penebar Swadaya.
- Wieland, R., Ravensbergen, S., Gregr, E. J., Satterfield, T., & Chan, K. M. (2016). Debunking trickle-down ecosystem services: The fallacy of omnipotent, homogeneous beneficiaries. *Ecological Economics*, 121, 175–180. <https://doi.org/10.1016/j.ecolecon.2015.11.007>
- Wonda M, Tomayahu E. (2016). Pendapatan usahatani tanaman kakao (*Teobroma kakao*) di Kelurahan Hinekombe, Distrik Waibu, Kabupaten Jayapura. *Agrologia*. 5(1):30-35.
- Wertz-Kanounnikoff, S., Locatelli, B., Wunder, S., & Brockhaus, M. (2011). Ecosystem-based adaptation to climate change: What scope for payments for environmental services? *Climate and Development*, 3(2), 143–158. <https://doi.org/10.1080/17565529.2011.582277>
- West Kalimantan Province. (2022). West Kalimantan Province Regional Regulation Number 6 of 2022 on Management of Environmental Services. West Kalimantan Province Regional Gazette of 2022 Number 6, West Kalimantan Provincial Government: Pontianak.
- Wijayati H., & Haqqi H., (2022). The Indonesian Global Cocoa Chain's Position in the Pandemic Era. *International Journal on Social Science, Economics and Art*, 12 (1) (2022) 10-21. <https://doi.org/10.35335/ijosea.v12i1.75>
- Wood, G.A.R. and Lass, R.A. (2001). Cacao, 4th ed. p. 620, Blackwell: Oxford, United Kingdom.
- Wunder, S. (2005). Payments for environmental services: some nuts and bolts.
- Wunder, S. (2006). Are Direct Payments for Environmental Services Spelling Doom for Sustainable Forest Management in the Tropics? *Ecology and Society*, 11(2). <http://www.jstor.org/stable/26266013>



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- Wunder, S., Engel, S., & Pagiola, S. (2008). Taking stock: Lessons learnt for the design of payment for environmental sciences programs. *Ecol Econ*, 65, 834-852.
- Wüstenhagen, R., Wolsink, M., & Bürer, M. J. (2007). Social acceptance of renewable energy innovation: An introduction to the concept. *Energy Policy*, 35(5), 2683–2691. <https://doi.org/10.1016/j.enpol.2006.12.001>
- Yang, Y., Chen, Y., Yu, Z., Li, P., & Li, X. (2020, October 19). How Does Improve Farmers' Attitudes toward Ecosystem Services to Support Sustainable Development of Agriculture? Based on Environmental Kuznets Curve Theory. *Sustainability*. <https://doi.org/10.3390/su12208655>
- Yin, R. K. (2003). Case study research: Design and methods (3rd ed.). Thousand Oaks, CA: Sage.
- Yin R. (2009). Case study research: Design and methods (4th ed.). SAGE Publications
- Yin, R. K. (2017). Case Study Research and Applications (6th ed.. SAGE Publications.
- Zhang, M. (2022). Households' Willingness to Accept Forest Conservation and Ecosystem Services. *Forests*, 13(9), 1399. <https://doi.org/10.3390/f13091399>
- Zoeller, K. C., Gurney, G. G., Marshall, N., & Cumming, G. S. (2021). The role of socio-demographic characteristics in mediating relationships between people and nature. *Ecology and Society*, 26(3). <https://doi.org/10.5751/es-12664-260320>



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