## Appendix S1 – Overview of data sources

## Electronic Supplementary Material

This supplementary material has not been peer reviewed.

Title: Social-Ecological Change in the Omo-Turkana Basin: A Synthesis of Current Developments

Authors: Jennifer Hodbod\*, Edward G. J. Stevenson\*, Gregory Akall, Thomas Akuja, Ikal Angelei, Elias Alemu Bedasso, Lucie Buffavand, Samuel Derbyshire, Immo Eulenberger, Natasha Gownaris, Benedikt Kamski, Abdikadir Kurewa, Michael Lokuruka, Mercy Fekadu Mulugeta, Doris Okenwa, Cory Rodgers, Emma Tebbs.

| Author              | Discipline of study within the region | Data details  | Related publications   |
|---------------------|---------------------------------------|---|--|
| Jennifer<br>Hodbod  | Environmental<br>Social Science       | Framing knowledge,<br>social-ecological<br>systems and political<br>ecology work<br>elsewhere in Ethiopia<br>since 2011, and in the<br>Lower Omo from<br>2018.  | Hodbod, J., Tomei, J., & Blaber-Wegg, T. (2015). A Comparative Analysis of the Equity Outcomes in Three Sugarcane-Ethanol Systems. <i>The Journal of Environment &amp; Development</i> , 24(2), 211–236.<br>https://doi.org/10.1177/10704965155<br>83556   |
| Edward<br>Stevenson | Anthropology                          | Food security survey<br>and ethnographic<br>work in Lower Omo<br>carried out between<br>2012 and 2018.  | <ul> <li>Stevenson, E. G. J., &amp; Buffavand, L. (2018). "Do our bodies know their ways?" Villagization, food insecurity, and ill-being in Ethiopia's Lower Omo Valley. <i>African Studies Review</i>, <i>61</i>(1), 109-133.</li> <li>Stevenson, E. G. (2018). Plantation Development in the Turkana Basin: The Making of a New Desert? <i>Land</i>, <i>7</i>(1), 16.</li> </ul> |
| Gregory<br>Akall    | Geography (Human<br>Development)      | Fieldwork on the<br>history of irrigation<br>development in the<br>Turkwel River Basin,<br>Turkana<br>County conducted<br>between 2013 and<br>2016. Data methods<br>involved participant<br>observation, semi-<br>structured interviews,<br>participatory GIS,<br>FGDs and documents<br>analysis. | PhD thesis in preparation.   |
| Thomas<br>Akuja     | Dryland<br>Agriculture                |   | Ebei, P.A., Gufu, O. and<br>Akuja, T.E. (2008). Re-<br>evaluation of long-term trends<br>of drought early warning<br>pastoral production indicators<br>in Turkana District, Kenya<br>1987-2004, 2008, Droughts:<br>Effects, Causes and Predictions<br>(Ed. J. M. Sanchez), Chapter   |

|                        |  |  | 3:103-138.<br>Akuja, T.E., Mutua, B.M.,<br>Guliye, A.Y., Gichaba, C.M.<br>Ngigi, M.W. Karachi, M. and<br>Abdulrazak, S.A. (2009).<br>Trends and Current Status of<br>Indigenous Knowledge among<br>the Inhabitants of the Turkwel<br>Riverine, Turkana District,<br>Kenya, Indilinga (African<br>Journal of Indigenous<br>Knowledge System), Vol.<br>8(2):209-217  |
|------------------------|--|--|--|
| Elias Alemu<br>Bedasso | Social<br>Anthropology                             | Historical<br>ethnography, ethno-<br>genesis, border<br>narratives   | Elias, A.B. (2015). "Surviving on the<br>Margin: The Predicaments of<br>Nyangatom along the Borderlands of<br>Ethiopia, Kenya, and South Sudan".<br>Paper presented at 57 <sup>th</sup> Annual<br>Western Social Science Association<br>(WSSA) Conference, November 26-<br>28 2015. Association for<br>Borderlands Studies.  |
| Lucie<br>Buffavand     | Social<br>Anthropology                             | Participant<br>observation and<br>interviews in Bodi,<br>Selamago woreda,<br>during four months<br>between 2012 and<br>2015. | Buffavand, L. (2016). "The land<br>does not like them": contesting<br>dispossession in cosmological terms<br>in Mela, south-west Ethiopia. Journal<br>of Eastern African Studies, 10(3),<br>476–493.<br>https://doi.org/10.1080/17531055.20<br>16.1266194<br>Stevenson, E. G., & Buffavand, L.<br>(2018). "Do Our Bodies Know Their<br>Ways?" Villagization, Food<br>Insecurity, and Ill-Being in<br>Ethiopia's Lower Omo<br>Valley. <i>African Studies</i><br><i>Review</i> , 61(1), 109-133. |
| Samuel<br>Derbyshire   | Social<br>Anthropology,<br>History,<br>Archaeology | 14 months of<br>ethnographic<br>fieldwork in southern<br>Turkana 2014-2015<br>and various shorter                            | Derbyshire, S. (2017). Trade,<br>Development and Resilience: An<br>Archaeology of Contemporary<br>Livelihoods in Turkana, Northern<br>Kenya. PhD thesis, University of   |

|                     |   | research visits<br>including interviews,<br>surveys and group<br>meetings either side<br>(2013-2017).  | Oxford.<br>Derbyshire, S. (2019) 'Trade,<br>development and destitution: a<br>material culture history of fishing on<br>the western shore of Lake Turkana,<br>northern Kenya'. African Studies<br>78(1).<br>Derbyshire, S., and Lowasa, L.<br>(forthcoming) 'The ruins of Turkana:<br>an archaeology of failed<br>development in northern Kenya'. In<br>N. Berre, N. Hoyum, P. Geissler and<br>J, Lagae (eds.) Forms of Freedom:<br>Legacies of African Modernism.<br>Bristol: Intellect.  |
|---------------------|---|--|--|
| Immo<br>Eulenberger | Social<br>anthropology;<br>History;<br>Development<br>studies | >35 months of<br>fieldwork in the<br>region (2007-2017)<br>with >1500<br>conversations<br>recorded; extensive<br>secondary data<br>collection.   | <ul> <li>Eulenberger, I., Kamski, B., &amp;<br/>Longole, H. (2018). Pastoral civil<br/>societies: cooperative empowerment<br/>across boundaries in borderlands of<br/>Kenya, Uganda and Ethiopia; study<br/>of civil society in Eastern African<br/>border regions.</li> <li>Eulenberger, I. (2013). Pastoralists,<br/>Conflicts and Politics: South Sudan's<br/>Kenyan Frontier. In: C. Vaughan, M.<br/>Schomerus &amp; L. de Vries (eds) "The<br/>Borderlands of South Sudan", New<br/>York, etc.: Palgrave Macmillan, 67-<br/>88</li> </ul> |
| Natasha<br>Gownaris | Aquatic<br>Ecology/Fisheries                                  | Three months of<br>fieldwork on Lake<br>Turkana over three<br>years (2011-2013),<br>six year collaboration<br>with Kenya Marine<br>and Fisheries<br>Research Institute<br>(2010-2015),<br>literature review. | Gownaris, N. J. (2015).<br>Understanding the Impacts of<br>Changes in Water Inflow on the<br>Fishes of Lake Turkana, Kenya<br>(PhD, State University of New York<br>at Stony Brook).<br>Gownaris, N. J., Pikitch, E. K., Aller,<br>J. Y., Kaufman, L. S., Kolding, J.,<br>Lwiza, K. M. M., Rountos, K. J.<br>(2016). Fisheries and water level<br>fluctuations in the world's largest<br>desert lake. Ecohydrology.  |

|                     |   |  | https://doi.org/10.1002/eco.1769<br>Gownaris, N. J., Pikitch, E. K.,<br>Ojwang, W. O., Michener, R., &<br>Kaufman, L. (2015). Predicting<br>Species' Vulnerability in a<br>Massively Perturbed System: The<br>Fishes of Lake Turkana, Kenya.<br>PLOS ONE, 10(5), e0127027.<br>https://doi.org/10.1371/journal.pone.<br>0127027  |
|---------------------|---|--|---|
| Benedikt<br>Kamski  | Political Sciences;<br>Hydro-politics   | In-depth study of<br>KSDP and selected<br>commercial farming<br>schemes in<br>Nyangatom and<br>Hamer Weredas.<br>Extensive primary<br>and secondary data<br>collection in Ethiopia<br>(esp. South Omo) and<br>Lake Turkana region<br>since 2013. | Kamski, B. (2016) The Kuraz Sugar<br>Development Project <i>OTuRN</i><br><i>Briefing Note Nr. 1</i> Omo-Turkana<br>Research Network, Lansing<br>Michigan. Retrieved from:<br>http://www.canr.msu.edu/oturn/briefi<br>ng_notes<br>Kamski, B. (2016). The Kuraz Sugar<br>Development Project (KSDP) in<br>Ethiopia: between "sweet visions"<br>and mounting challenges. <i>Journal of</i><br><i>Eastern African Studies</i> , <i>10</i> (3), 568–<br>580.<br>https://doi.org/10.1080/17531055.20<br><u>16.1267602</u> |
| Abdikadir<br>Kurewa | Sociology;<br>anthropology  | Resident of Marsabit<br>County and a<br>research assistant at<br>the National<br>Museums of Kenya.   | Cormack, Z., & Kurewa, A. (2018).<br>The changing value of land in<br>Northern Kenya: the case of Lake<br>Turkana Wind Power. <i>Critical</i><br><i>African Studies</i> , <i>10</i> (1), 89-107.  |
| Michael<br>Lokuruka | Food science, fish<br>and food product<br>quality assurance,<br>history & food<br>anthropology of<br>Turkana region | Resident of Turkana<br>County and worked<br>in the past on the lake<br>fisheries for over 8<br>years.  | Lokuruka, MNI. (2015). a report to<br>Turkana County Government on<br>establishment of Lake Turkana<br>Development and Management<br>Authority, November, 2015.<br>Lokuruka, MNI. (2008). The failure<br>of the Norwegian-supported fish<br>factory in Turkana, Kenya: an<br>ecological-historical perspective.<br>Egerton J. Science and Technology,<br>Vol 2&3, 147-165.  |
| Mercy               | Peace and Security  | Political history of   | Mulugeta, Mercy F. (2017) Small   |

| Fekadu          | Studies   | Ethiopia, traditional   | Arms And Conflict Among East  |
|-----------------|---|---|---|
| Mulugeta        |   | governance systems,<br>conflict in the Lower<br>Omo and elsewhere<br>in Ethiopia,   | African Pastoralists: The Karamoja<br>(In)Security Complex. <i>Africa</i> , 87(4),<br>Oct 2017  |
|                 |   | government security<br>providers in the<br>Lower Omo.   | Mercy, F.M. (2016). Statehood,<br>Small Arms and Security<br>Governance in Southwest Ethiopia:<br>The Need for an African-Centred<br>Perspective. In: S. Okello & M.<br>Gebremichael (Eds.) "African-<br>Centred Solutions: Building Peace<br>and Security in Africa", Addis<br>Ababa: Institute of Peace and<br>Security Studies, 103-134.                               |
|                 |   |   | Mercy, F.M. Small Arms and<br>Security governance: The Case of<br>Nyangatom people of southwest<br>Ethiopia, 2016. Unpublished PhD<br>Dissertation  |
|                 |   |   | Mercy, F.M. (2015). The Future of<br>Small Arms in Pastoral Lowlands of<br>the Horn of Africa: a Case of<br>Nyàngatom people in southwest<br>Ethiopia. Peace, Federalism and<br>Human Rights. Papers presented at<br>the First Graduate Conference on<br>Peace, Federalism and Human<br>Rights, August 12-13, 2015. Institute<br>of Peace and Security Studies<br>(IPSS). |
| Doris<br>Okenwa | Social & Cultural<br>Anthropology,<br>international<br>development,<br>natural resources,<br>extractives industry | Ethnogaphy – 13<br>months fieldwork.  | PhD thesis forthcoming  |
| Cory Rodgers    | Anthropology  | 18monthsoffieldworkinpastoralist,fishing,andurbanTurkanacommunities;2monthsoffieldworkatatKakumarefugeecampsinTurkanaCounty | PhD thesis forthcoming: The Politics<br>of Inclusion and Negotiating<br>Rightful Share in Kenya's Emerging<br>Oil Industry<br>Okenwa, D. (2017). Kenya's New<br>Oil: Rethinking Brokers, Translators<br>and Mediators (forthcoming  |

|            |                                  |   | AAS/ASA/ASAANZ 2017<br>conference) |
|------------|----------------------------------|---|------------------------------------|
| Emma Tebbs | Remote sensing<br>ecohydrologist | Satellite imagery<br>from NASA's<br>Landsat 8 and ESA's<br>MERIS sensors. |                                    |