

# Centre for Land Tenure Studies

Norwegian University of Life Sciences (NMBU)



2020 Annual Report

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## Summary of activities in 2020

In the year 2020, the Centre for Land Tenure Studies (CLTS) produced 8 working papers and 2 reports. These papers and reports are accessible through the CLTS webpage, the Scandinavian Working Papers in Economics (S-WoPEc) and the library (Brage) of the Norwegian University of Life Sciences (NMBU). In the year, CLTS partnered with Land Portal hence the CLTS work is now also accessible through the Land Portal webpage (<https://landportal.org>).

Through these webpages, the RePEc (Research Papers in Economics) statistics for 2020 indicates that abstract views for the CLTS working papers increased by 11 percent while downloads of file document reduced by 25 percent compared to the work in 2019. Long-term trends on the visibility of CLTS work shows a higher increase in abstract views in the past two years.

In the year, CLTS also registered several papers published in international journals and books through the research work of NMBU faculty members and PhD students. Additionally, members participated in different conferences and workshops, including the workshop hosted by Global Land Tool Network (GLTN) of UN-Habitat, in partnership with the Norwegian Mapping Authority (NMA) and Habitat Norway (HN) in Oslo.

## Centre for Land Tenure Studies

The Centre for Land Tenure Studies was opened at NMBU (earlier UMB) on the 27<sup>th</sup> of June 2011 resulting from a joint initiative by researchers at the Department of International Environment and Development (Noragric), the School of Economics and Business, and the Department of Landscape Architecture and Spatial Planning. In 2012 CLTS was joined by the Department of Ecology and Natural Resource Management.

### Board of the Centre for Land Tenure Studies

- Eirik Romstad (chair), School of Economics and Business,
- Shai Andre Divon, Department of International Environment and Development,
- Inger-Lise Saglie, Department of Landscape Architecture and Spatial Planning,
- Tron Haakon Eid, Department of Ecology and Natural Resource Management,

### People at CLTS

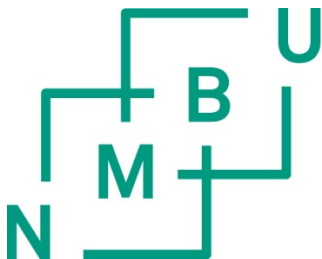
Core team: Stein Holden, Terje Holsen and Espen Sjaastad.

Associates: Bernt Aarset, Arild Angelsen, Tor Arve Benjaminsen, Erling Berge Einar Bergsholm, Per Kåre Sky, Sølve Bærug, Einar A. Hegstad, Darley Jose Kjosavik, Eirik Romstad, Dag Einar Sommervoll, Håvard Steinsholt, Steinar Taubøll, Arild Vatn and Pål Vedeld.

Post doc researcher: Mesfin Tilahun

PhD students:

Administrative support: Sarah Tione.



**Norwegian University of Life Sciences**  
**Centre for Land Tenure Studies**

## Mission

The Centre for Land Tenure Studies (CLTS) at NMBU is established to further the study of land tenure. Land tenure studies define a broad and complex field of study cutting across many disciplines. For CLTS this entails, but is not limited to, the following activities:

- Provide a common arena for discussing land tenure issues, including a series of seminars directed to present new research or important theoretical perspectives. This may be designed as part of an educational program.
- Promulgate a joint series of working papers.
- Support international publication of articles and books.
- Develop and conduct joint courses at both Master and PhD level.
- Initiate and support exchange of researchers.
- Participate in research networks related to land tenure.
- Maintain a public list of collaborating institutions and researchers.
- Initiate and develop applications for research funds to support basic research on land tenure both by our own efforts and in collaboration with other research groups working on land tenure questions.

In its activities, the centre will use English as its working language as far as practically possible.

*In short, we may say that “the mission of the Centre for Land Tenure studies is to enhance collaboration across departments at NMBU; to strengthen the visibility of NMBU activities within the field of land tenure; to strengthen NMBU’s international collaboration and networks within the field; to contribute to research and knowledge generation on land tenure issues; to help build capacity in the South and in Norway within the field; to disseminate policy lessons, and to contribute to policy debates”.*

# 2020 Report

## Faculty Activities at NMBU

### School of Economics and Business

The main activities of relevance in our School were under the NORAD NORHED capacity-building program, Climate Smart Natural Resource Management and Policy (CLISNARP), a collaboration with Mekelle University in Ethiopia and LUANAR University in Malawi from where a number of PhD-students come to take their PhDs in our School. We have four papers published in international journals where they are single authors or first authors. Four of the PhD-students are near finishing their PhDs. The COVID-19 pandemic as well as the political unrest in the Tigray Region of Ethiopia contributed to delays in their finishing. Since early November there has been no internet connection with Mekelle University. The COVID-19 pandemic also prevented participation in international conferences.

The other major activity in the School was the research project "Youth Business Groups for Sustainable Development: Lessons from the Ethiopian Model" (YOUTHBUS), funded by the Research Council of Norway under the NORGLOBAL2 program. The fieldwork under the project in Tigray Region in Ethiopia focuses on resource-poor rural youth that have been offered to establish formal businesses as primary cooperatives. The project implements surveys and experiments for a large number of such youth business groups and group members in order to understand factors influencing their varying degree of success. It also includes training experiments implemented as Randomized Control Trials with a focus on leadership training, female group member empowerment and risk management. A Pre-Analysis plan was prepared for the female group member empowerment training RCT in 2020 and this plan is published as a CLTS report. The analysis of risk and time preferences data from the youth has been presented in three CLTS working papers and the papers have been submitted to international journals. The further implementation of the RCTs had to stop in April 2020 due to the pandemic. The civil unrest that started in November 2020 has had devastating effects in our study areas and has made any further fieldwork impossible during 2020. It is hard to know the whereabouts of our research subjects. The research work under the project continues on the already collected data. Luckily, we managed to collect a lot of survey and experimental data before we had to stop the fieldwork.

The School is also involved in another research project, "Access to seeds: from Emergencies to Seed System development" (ACCESS), which is the responsibility of LANDSAM (Noragric). The School is responsible for one PhD student recruited on the program and work on seed access is planned in Ethiopia, Malawi and Tanzania based on nationally representative surveys (LSMS) and field experiments. Two new NORAD-funded capacity-building projects under NORHED II received funding and will start in 2021. One of these projects, Smartex, is a collaboration project with LUANAR in Malawi and focuses on land and water rights related to irrigation and on climate-smart agriculture. Sarah Tione will be a postdoc on this project, and she will focus in particular on land and water rights in relation to irrigation.

## LANDSAM – Department of Property and Law

The department of Property and Law has been involved in the following research projects:

- LANDFRAG – Land fragmentation in agriculture—causes, consequences and measures
- FUTGRAZE – Towards a Future for Common Grazing – rules, norms and cooperation in outlying grazing areas
- Plan Coast – Integrated Coastal Zone Management and Planning: Legal and structural challenges

## LANDSAM – Noragric

- Two new PhD candidates were recruited to Noragric's IEDS programme in 2020. Land tenure is not the central focus in either of them, but the topics (lithium mining in Zambia and food system transformations) might possibly incorporate tenure issues.

## CLTS Working Papers

1. Stein T. Holden and Mesfin Tilahun (2020). [Endowment Effects and Loss Aversion in the Risky Investment Game. CLTS Working Paper No. 1/2020](#). Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway.

**Abstract of the paper:** The risky investment game of Gneezy and Potters (1997) has been a popular tool used to estimate risk tolerance and myopic loss aversion. We have assessed whether a simple one-shot version of this game that is attractive as a simple tool to elicit risk tolerance among respondents with limited education, can lead to biased estimates of risk aversion due to endowment effects. We use a field experiment with a pool of young business group members with limited education to test for the potential bias associated with the initial endowment allocation.

We find a highly significant endowment effect which may explain low investment levels and exaggerated measures of risk aversion where this game has been used to estimate risk aversion. We develop and test a more balanced version of the risk investment game and demonstrate that it gives less bias due to endowment effects than the standard design and a full risk design that creates an endowment effect in the opposite direction, indicating that loss aversion may not be the primary cause of the endowment effect.



2. Stein T. Holden and Mesfin Tilahun (2020). [Farm size and gender distribution of land: Evidence from Ethiopian land registry data. CLTS Working Paper No. 2/2020](#). Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway.

**Abstract of the paper:** Land is an essential asset for the livelihood and welfare of rural households in agriculture-based rural economies. This study utilizes land registry data from the First and Second Stage Land Registration (FSLR and SSLR) Reforms that took place in 1998 and 2016 in the Tigray region of Ethiopia, the first region in Ethiopia to implement land registration and certification. Second Stage Land Registration and Certification (SSLR & C) provided households with parcel-based certificates with the names of all holders. We assess the changes in farm sizes and gender distribution of land using mean and median sizes, Gini coefficients, and cumulative distribution graphs. The SSLR data facilitate detailed gender-disaggregated analysis after aggregating parcel data by gender to household level and categorizing households into male- and female-headed households.





The data came from 11 municipalities in four districts, covering 78,700 parcels, a total area of about 30,000 ha, allocated to 31,150 households (SSLR). Average farm size declined from 1.15 to 0.90 ha and median farm size from 0.88 to 0.63 ha from 1998 to 2016. The Gini coefficient for land per capita increased from 0.42 in 1998 to 0.57 in 2016. The female landholding share for this land was as high as 48.8% in 2016. Compared to female-headed households, male-headed households had on average 27% and 35% more land per household in 1998 and 2016. The study demonstrates the relevance of land registry data for monitoring farm sizes and gender distribution of land and the findings are of relevance to Sustainable Development Goal 1.4.

3. Menasbo Gebru, Stein T. Holden and Frode Alfnes (2020). [Adoption of agricultural technologies in the semi-arid northern Ethiopia: A Panel Data Analysis](#). CLTS Working Paper No. 3/2020. Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway.

**Abstract of the paper:** Agricultural technology change is required in developing countries to increase the robustness to climate-related variability, feed a growing population, and create opportunities for market-oriented production. This study investigates technological change in the form of adoption of improved wheat, drought-tolerant teff, and cash crops in the semi-arid Tigray region in northern Ethiopia. We analyze three rounds of panel data collected from smallholder farms in 2005/2006, 2009/2010 and 2014/2015 with a total sample of 1269 households. Double-hurdle models are used to assess how the likelihood (first hurdle) and intensity of technology adoption (second hurdle) are affected by demographic, weather, and market factors.

The results indicate that few smallholders have adopted the new crops, those that have adopted the crops only plant small shares of their land with the new crops, and that there has been only a small increase in adoption over the ten-year period. Furthermore, we find that high population density is positively associated with the adoption of improved wheat, and previous period's rainfall is positively associated with the adoption of drought-tolerant teff. The adoption of cash crops is positively associated with landholding size and access to irrigation. The policy implications of these results are that the government should increase the improved wheat diffusion efforts in less population dense areas, make sure that drought-tolerant teff seed is available and affordable after droughts, and promote irrigation infrastructure for production of cash crops.



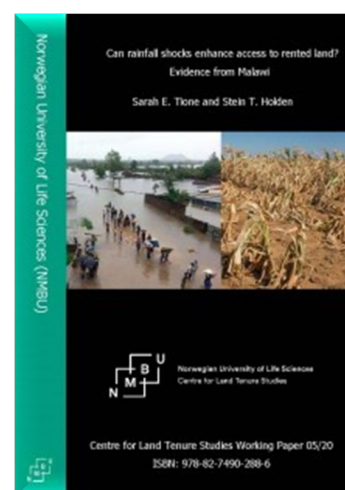
4. Per Kåre Sky (2020). [Negotiations in planning and urban land consolidation. CLTS Working Paper No. 4/2020](#). Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway.

**Abstract of the paper:** Negotiations are important in urban densification processes. In particular, integrative negotiations seem to be relevant. The conflicts between neighbors and developers can be challenging to resolve. Land readjustment is used in several countries to merge properties or reshape properties in conjunction with densification projects. Conflicts can be handled and reduced by land readjustment. Should such a measure be relevant in Norway, it is recommended, among other things, that a majority of landowners within a land readjustment area must be in favor. There is a need for changes in both the Land Consolidation Act and the Planning and Building Act. Voluntary land readjustment should also be encouraged.



5. Sarah E. Tione and Stein T. Holden (2020). [Can rainfall shocks enhance access to rented land? Evidence from Malawi. CLTS Working Paper No. 5/2020](#). Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway.

**Abstract of the paper:** This study investigates whether and to what extent rainfall shocks recurring in Sub-Saharan Africa, that have been associated with distress land rentals, enhance short-term and medium-term access to rented land by tenant households. Tenant households' rental decisions are modeled in the state-contingent framework with renting-in of land as a risky input choice. Our data is from three rounds of LSMS data from Malawi used to construct a balanced household panel, combined with corresponding district rainfall data that are used to generate seasonal district-wise rainfall shock variables. Panel probit and Tobit models controlling for unobserved heterogeneity were used. Regional heterogeneities were revealed.



The results from the Central Region of Malawi, where land rental markets are most active, indicates that the one-year and two-year lagged downside rainfall shocks help tenant households accessing land not only the first year after a rainfall shock but also in the following years. For the more land constrained Southern Region of Malawi, with less prevalence of land rental markets, we observed that the two-year lagged downside rainfall shock is associated with less access to rented land. These results reveal surprising intertemporal and regional variations that are important for policy discussions and lessons on land rental markets amidst recurring rainfall shocks in SSA.

- Stein T. Holden (2020). [Gender dimensions of land tenure reforms in Ethiopia 1995-2020. CLTS Working Paper No. 6/2020](#). Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway.

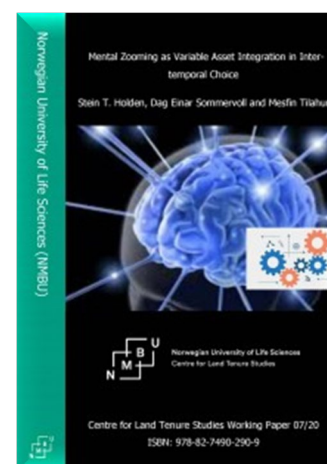
**Abstract of the paper:** This chapter investigates how land tenure reforms in Ethiopia have influenced the position of women in terms of land tenure security, access to land, decision-power over land within households, as well as the gendered impacts of these tenure reforms on land investments, land productivity, land renting, and household consumption welfare. It is based on a careful screening of the relevant literature based on its quality and critically examining the reliability of the causal effects in each study. As most studies are based on survey data, studies that have been able to provide reasonably robust quantitative assessments are utilized.

The review concludes that there exists strong evidence that the low-cost land registration and certification reform in Ethiopia has contributed to strengthening women's land rights and decision-power over land and this has had positive welfare effects in female-headed as well as male-headed households. More research is needed to study the productivity and welfare effects of the ongoing 2nd Stage Land Registration and Certification reform but early findings indicate that it has contributed to formally document parcel-level land rights of women that are close to that of men even in the Tigray region where 1st Stage Land Registration and Certification was in the name of the head of household that in most cases was a man.



- Stein T. Holden, Dag Einar Sommervoll and Mesfin Tilahun (2020). [Mental Zooming as Variable Asset Integration in Inter-temporal Choice. CLTS Working Paper No. 7/2020](#). Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway.

**Abstract of the paper:** Our time preferences deviate systematically from that of Homo economicus. They seem to be driven by a form of mental zooming, where higher and more distant payouts induce a more holistic perspective in contrast to smaller and near future payouts. We model zooming as variable asset integration and ask whether this can explain the observed variation in discount rates in experiments. It can. Equally important, the zooming for both time and magnitude is similar across two countries (Ethiopia and Malawi), and within a country (Ethiopia). An intriguing empirical regularity is that the dimensionless degree of zooming in time is roughly twice the zooming degree in magnitude. We offer no explanation for this asymmetry between time and magnitude.



8. Stein T. Holden, Mesfin Tilahun and Dag Einar Sommervoll (2020). [Magnitude Effects and Utility Curvature in Inter-temporal Choice. CLTS Working Paper No. 8/2020](#). Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway.

Abstract of the paper: The appropriate way to empirically estimate time-dated utility and time preferences based on experimental data has been subject to controversy. Our study assesses whether within-subject magnitude treatments are more appropriately modeled through utility curvature, variable asset integration or as magnitude effects in the discounting function.

We find that modeling magnitude effects through utility curvature at the same time as allowing for variable asset integration gives theoretically more consistent parameter ranges than including magnitude effects directly in the discounting function. Models with constant discount rates and limited and constant asset integration are rejected. More restricted but variable asset integration gives close to linear utility functions but such models are less robust than a matching fund model which gives a better fit and is robust and stable across multiple samples.



## Journal Papers and Book chapters

1. Sarah E. Tione and Stein T. Holden (2020). [Urban proximity, demand for land and land shadow prices in Malawi](#). *Land Use Policy*, doi: 10.1016 / j.landusepol.2020.104509.



**Abstract:** We assess the spatial and intertemporal variation in farmland prices using per hectare minimum willingness to accept (WTA) sales and rental (shadow) prices in Malawi. We use three rounds of nationally representative farm household panel data from the Living Standards Measurement Surveys (LSMS), collected in 2010, 2013 and 2016. The sample is split in quintiles based on distance from the nearest major city, building on the land valuation and transaction cost theory, and agrarian political economy perspectives on global and national land transactions. Generally, farmland shadow prices decrease with distance from urban areas. However, farmland shadow sales prices increased more sharply between 2010

and 2013 in rural areas (+100 % vs +30 % in urban proximity).

The results indicate that the sharp increase in demand for large-scale land transfers following the sharp increase in energy and food prices also affected rural smallholders' land valuation, even in remote rural areas of Malawi. Conversely, by 2016 land shadow sales prices were again, like in 2010, about three times as high in areas near urban centres compared to remote rural areas. Even though sales prices declined in remote rural areas from 2013 to 2016, rental prices remained high. Using farm household-level population pressure variable, we show that local population pressure is a driver of farmland shadow prices, indicating land scarcity challenges, growing demand for land, and poorly developed land markets. With increasing land scarcity, land markets are becoming more important and need to be factored in when formulating development policies that aim to improve access to land in both peri-urban and rural areas.



2. Stein T. Holden and Mesfin Tilahun (2020). [Farm size and gender distribution of land: Evidence from Ethiopian land registry data](#). World Development, doi: 10.1016 / j.worlddev.2020.104926



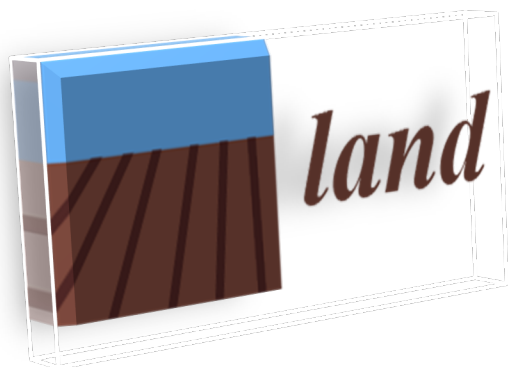
Abstract: Land is an essential asset for the livelihood and welfare of rural households in agriculture-based rural economies. This study utilizes land registry data from the First and Second Stage Land Registration (FSLR and SSLR) Reforms that took place in 1998 and 2016 in Tigray region of Ethiopia, the first region in Ethiopia to implement land registration and certification. Second Stage Land Registration and Certification (SSLR&C) provided households with parcel-based certificates with names of all holders. We assess the changes in farm sizes and gender distribution of land using mean and median sizes, Gini coefficients, and cumulative distribution graphs. The SSLR data facilitate detailed gender-disaggregated analysis after aggregating parcel data by gender to household level and categorizing households in

male- and female-headed households.

The data came from 11 municipalities in four districts, covering 78,700 parcels, a total area of about 30,000 ha, allocated to 31,150 households (SSLR). Average farm size declined from 1.15 to 0.90 ha and median farm size from 0.88 to 0.63 ha from 1998 to 2016. The Gini coefficient for land per capita increased from 0.42 in 1998 to 0.57 in 2016. The female landholding share for this land was as high as 48.8% in 2016. Compared to female-headed households, male-headed households had on average 27% and 35% more land per household in 1998 and 2016. The study demonstrates the relevance of land registry data for the monitoring of farm sizes and gender distribution of land and the findings are of relevance for the Sustainable Development Goal 1.4.



3. Angelsen, Arild; Aguilar-Støen, Mariel; Ainembabazi, John Herbert; Castellanos, Edwin; Taylor, Matthew (2020). [Migration, agriculture and forest cover change in rural Guatemala and Chiapas](#) . *Land* , doi: 10.3390 / land9030088



**Abstract:** This article investigates how migration and remittances affect forest cover in eight rural communities in Guatemala and Chiapas, Mexico. Based on household surveys and remote sensing data, we found little evidence to support the widespread claim that migration takes pressure off forests. In the Chiapas sites, we observed no significant changes in forest cover since 1990, while in

the Guatemalan sites, migration may have increased demand for agricultural land, leading to an average annual forest loss of 0.73% during the first decade of the millennium.

We suggest that when attractive opportunities exist to invest in agriculture and land expansion, remittances and returnee savings provide fresh capital that is likely to increase pressure on forests. Our study also has implications for the understanding of migration flows; in particular, migration has not implied an exodus out of agriculture for the remaining household members nor for the returning migrants. On the contrary, returning migrants are more likely to be involved in farming activities after their return than they were before leaving.



4. Ngoma, Hambulo, Amare T Hailu, Stephen Kabwe and Arild Angelsen (2020). [Pay, Talk or 'Whip' to Conserve Forests: Framed Field Experiments in Zambia](#). *World Development* , doi: 10.1016 / j.worlddev.2019.104846



**Abstract:** Despite many efforts to conserve tropical forests, high rates of deforestation and forest degradation continue, threatening the products and environmental services they supply. We conducted framed field experiments (FFE) in Zambia to test, *ex-ante*, the impacts of different conservation policies: community forest management (CFM), command and control (CAC), and two versions of payments for environmental services (PES). Our FFEs mimicked how local dwellers use

forests in real life. Relative to open access (OA), PES to individuals reduced harvest by 15 percentage points (pp) while CFM reduced harvest rates by 8 pp.

We conjecture that free and easy-riding, combined with uncertainty on how others will reciprocate, dampens the positive effects of group-based PES. Impatience and risk-loving among participants significantly increased harvest rates while pro-social behavior (altruism) was associated with more pro-conservation. We conclude that conservation outcomes might be achieved by combinations of CFM and individual PES, by which individual households receive clear material benefits that compensate for their reduced forest use.



5. Katengeza SP (2020). [Impact of Farm Input Subsidies Vis-à-Vis Climate-Smart Technologies on Maize Productivity: A Tale of Smallholder Farmers in Malawi](#). In: Singh B., Safalaoh A., Amuri N., Eik L., Sitaula B., Lal R. (eds) *Climate Impacts on Agricultural and Natural Resource Sustainability in Africa*. Springer, Cham, doi: 10.1007 / 978-3-030-37537-9\_31



**Abstract:** Farm input subsidies in Malawi are historically a strategic agriculture policy tool, particularly for enhancing maize production for national and household food security. This chapter presents a review of the impact of access to inorganic fertilizer through the Farm Input Subsidy Program (FISP) on maize

productivity, and compares it with the impact of climate-smart agriculture (CSA) technologies, specifically the integration of inorganic and organic fertilizers.

Results show a modest impact of FISP on maize productivity. Maize–fertilizer response rates, reported as nitrogen use efficiency (NUE) among FISP beneficiaries, ranges from 3 to 14 kg of maize per 1 kg of nitrogen (N) (kg/kgN) fertilizer used, which is below the expected agronomic average of 15 kg/kgN. Conversely, the NUE is 17–36 kg/kgN on experimental





plots with integration of inorganic and organic fertilizer. These CSA technologies ensure efficient and optimal nutrient uptake and drought resilience. This suggests that the impact of FISP can be enhanced if application of subsidized inorganic fertilizer is integrated with CSA technologies. FISP implementation strategy should therefore consider abandoning the current farmer-based targeting system and subsidize the soil by targeting adopters of CSA technologies. This approach has potential to provide the Government of Malawi with a sustainable exit strategy from FISP.

6. Holden ST (2020). [Policies for Improved Food Security: The Roles of Land Tenure Policies and Land Markets](#). In: Gomez y Paloma S., Riesgo L., Louhichi K. (eds) *The Role of Smallholder Farms in Food and Nutrition Security*. Springer, Cham, doi: 10.1007 / 978-3-030-42148-9\_8

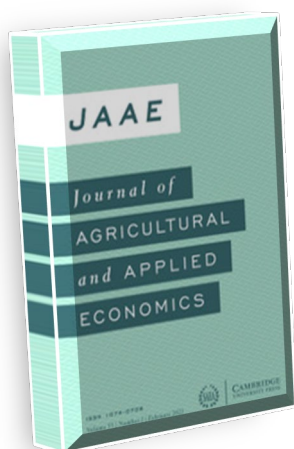


**Abstract:** This chapter provides an overview of what we know about farm size distributions, the emerging land markets, the role of tenure systems, tenure reforms and land policies in shaping

the distribution of increasingly scarce land resources. The primary focus is on Africa while making some comparisons with Asia. Climate risk and change have serious implications for household vulnerability and food security. While there is a need to absorb further population growth in rural areas, a rapid rise in rural-urban migration is inevitable. Careful land use planning and tenure reforms are needed to smooth the transition towards more intensive land use.



7. Tesfay M. (2020). [Impact of Land Rental Market Participation on Smallholder Farmers' Commercialization: Panel Data Evidence from Northern Ethiopia](#). *Journal of Agricultural and Applied Economics*, doi: 10.1017 / aae.2020.19

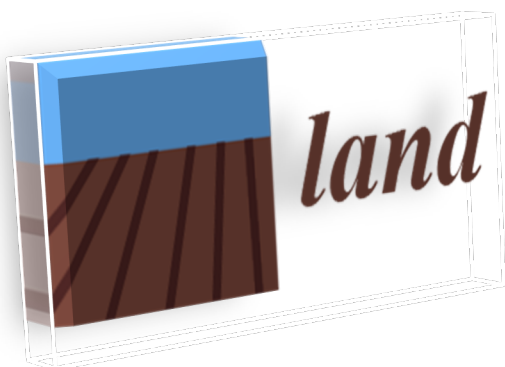


**Abstract:** The purpose of this study is to assess the impact of participation in the land rental market on smallholder farmers' commercialization using farm household panel data in Tigray, Ethiopia. Regression results reveal that 1 hectare increase in area rented in by tenant households leads to a 60% increase in the likelihood of participation in the output market as a crop seller and increases the marketed output sold by tenant households by US\$ 200/year. The results appear to indicate that land rental market in the land scarcity economy to some extent contributes positively in the facilitation of transformation toward smallholders' commercialization.



extent contributes positively in the facilitation of transformation toward smallholders' commercialization.

8. Sarah Ephrida Tione (2020). [Agricultural Resources and Trade Strategies: Response to Falling Land-to-Labor Ratios in Malawi](#). *Land*, doi: 10.3390/land9120512



**Abstract:** This study assesses how growing land scarcity relative to family labor is influencing farm household decisions to trade in agricultural land and labor markets to improve their livelihood. Using the farm household model, I analyze decisions to rent-in land or hire out labor among smallholders in Malawi. I use data from two rounds of a nationally representative

balanced-household panel and apply a systems approach to jointly estimate land rental and labor market decisions while controlling for simultaneity and unobserved heterogeneity.

The results indicate that the falling owned-land-to-labor-endowment ratio can push households to participate in either land rental or seasonal agricultural labor markets. However, the probability of hiring out labor for casual work and short-term gains

decreases when potential tenant households rent-in land. Based on asset-wealth-to-labor-endowment ratios, wealthier households are more likely to rent-in land while poorer households, including most smallholder households, are more likely to hire out labor. These results suggest higher friction in the land rental market compared to the agricultural labor markets and liquidity constraints dictating what is necessary to support agricultural operations and household needs. Accordingly, agricultural policy in Malawi should aim to reduce friction in factor markets.



9. Holsen, Terje (2020). Negotiations between developers and planning authorities in urban development projects. *disP – The Planning Review*, vol 56:3, 34-46, doi: 10.1080/02513625.2020.1851904



**Abstract:** Policy changes have resulted in a shift of focus from greenfield to brownfield development, leading to densification and transformation of the urban fabric. Planning decisions are necessary steps towards implementation. However, such decisions do not necessarily mean that development projects materialise. From there, public authorities can choose an active role, as in greenfield urban expansion, or a passive role leaving the implementation of the plan to private developers. Despite obvious shortcomings, zoning is still the common statutory instrument of land-use planning. Traditional flat, exclusionary zoning has been under attack and is claimed to be inflexible and narrowly focused. However, adaptability has been a principal feature of zoning, evolving as a system from rigid zoning to case-by-case approvals.

Consequently, modern zoning decisions are often made in direct negotiations with developers. Still, it is claimed that the statutory planning system leaves too little room for negotiations. Hence, informal strategic land-use planning has been adapted as an additional framework for negotiations. Norwegian planning has followed this international trend, introducing flexible zoning instruments and negotiations between planning authorities and developers and local public authorities rely on private property development as a means of urban development. The purpose of this article is to examine how municipal authorities and developers conduct negotiations on detailed zoning plans for the implementation of brownfield transformation projects in the existing urban fabric. The study is based on four cases in Oslo, where municipal authorities and developers have negotiated the content of the zoning plans for the implementation of primarily residential

development. The findings indicate that statutory and legally binding planning could work just as well as informal planning as the basis for integrative negotiations if statutory master plans are made more generic and allow for a necessary degree of flexibility. However, it seems that the parties' ability to trust each other is even more fundamental for both the opportunity to establish integrative negotiations and for the outcome of the negotiations.



**10.** Holsen, Terje (2020). A path dependent systems perspective on participation in municipal land-use planning in Norway. *European Planning Studies*, doi: 10.1080/09654313.2020.1833841



**Abstract:** Public participation in land-use planning cannot fully be understood without an equivalent understanding of the planning system supporting it. Too often, research lacks a prescriptive understanding of the legislator's intentions. The right of the public at large competes with other and more specifically designed rights of stakeholders, neighbours, sector authorities, etc. Hence, an adequate understanding of public participation must reflect the general design of all participatory rights in statutory land-use planning. Such rights are often established and shaped through several generations of planning legislation, reflecting a wish to safeguard specific interests.

In Norway, the safeguarding of property rights was a contingent occurrence. Other and more general participatory interests and the related rights in line with this, have subsequently been developed on this basis. This has created a path dependency in the design, content and relative strength of public participation relative to other and more specific participatory rights. In this article, public participation in Norwegian municipal land-use planning is analysed from such a path dependent systems perspective.



11. Holsen, Terje (2020). Utviklingsstrategier ved komplekse eiendomsforhold [Development strategies for complex tenure relations]. *Kart og plan*, vol. 80:1, doi: 10.18261/issn.2535-6003-2020-02-02

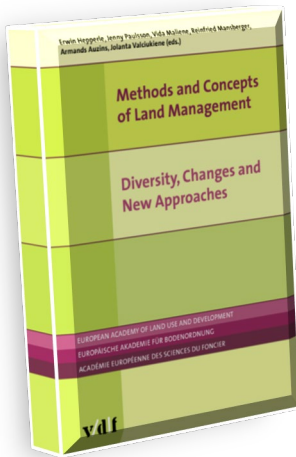


**Abstract:** At the beginning of the 1990s Norwegian land use policy changed from greenfield development to brownfield transformation and general densification within the existing urban structure. In parallel, commercial real estate development and market mechanisms became the preferred method of plan implementation. Densification and transformation sometimes occur without corresponding changes in the property structure. In some cases, however, real estate development will depend on simultaneous rights over adjacent properties, i.e. complex property structures, which in turn will depend on the implementation of well thought-out land assembly strategies.

This may be the case, for example, if CBD areas grow into residential areas or when older industrial or harbour areas are redeveloped. Such developments most often also depend on the development of public land use policies in order to be realized. However, there are few examples of land assembly strategies from public authorities aimed at providing land for such densification and transformation. Thus, to implement densification and transformation plans, the Norwegian municipalities rely on cooperation with real estate developers for implementing public land policies, and complex property structures are one key to understanding densification and transformation as property development. This article discusses development strategies for complex real estate structures, particularly related to the need for land assembly and the need to use property rights as tools to ensure the implementation of planning decisions. The purpose of the discussion is to set the Norwegian situation into a larger international context.



**12.** Holsen, Terje & Børrud, Elin (2020). The Urban Planning Split: Area Based Qualities vs. Efficient Project Implementation, in Hepperle, E., Paulsson, J., Maliene, V., Mansberger, R., Auzins, A., & Valciukiene, J. (eds.). *Methods and Concepts of Land Management - Diversity, Changes and New Approaches*. Zürich: vdf Hochschulverlag.

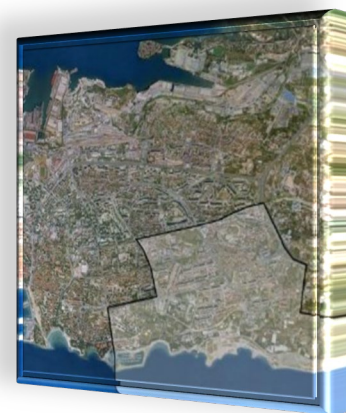


**Abstract:** Scarcity of land and land resources is a fundamental aspect of the public need to manage land use. According to the Norwegian Planning and Building Act, its purpose is to “promote sustainable development in the best interests of individuals, society and future generations” (section 1-1). General densification, understood as any infill development within the exist-ing urban structure, specific densification of hubs on the public transport system and brown-field transformation of the urban fabric are all a part of the land-use policy for such develop-ment. However, there are few examples of land assembly strategies from public authorities aimed at providing land for such densification and transformation. Thus, such land assembly is left to private property developers and most urban transformation relies on private real estate development

(Holsen 2019). Norwegian statutory land use planning is a relatively unique system internationally in the way it allows for private initiation and preparation of detailed zoning plans (Fredricsson and Smas 2013). Private real estate developers, aiming for delivering economic surplus for their owners, initiate and prepare the vast majority of all approved detailed zoning plans.

Achieving sustainable development for the society at large while securing efficient project implementation for the specific development, then, might be characterized as “the urban planning split”. Several studies indicate that the initial phase of the planning process and deliberation ahead of the formal planning process is crucial for overcoming this split (Børrud 2013; Meyer 2014; Holsen 2018; Tiller and Ekrene 2019). The purpose of this article is to frame what characterizes the initial phase of a private development plan and to discuss possible new perspectives on how to understand problems of implementing detailed zoning plans.

The experienced urban planning split is, first, a knowledge issue due to different expectations of how to interpret the urban situation, and, second, how on one side the private developers understand their responsibility to achieve a sustainable environment and on the other side how the planning authority understand the calculations of risks and costs of real estate development. It is reasonable to assume that the urban planning split might be reduced through better communication and a shared understanding of the urban context of the development project. However, it is also reasonable to assume that completely removing the split is impossible.

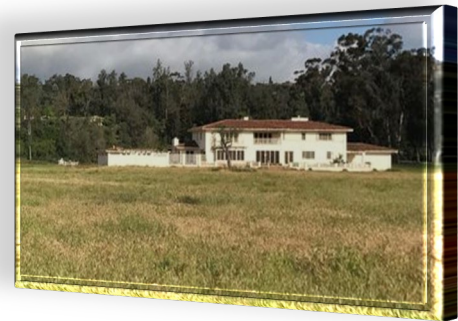


13. Elvestad, Helen E. & Holsen, Terje (2020). Real estate developers' opinions to negative covenants: the case of suburban densification in Oslo, Norway, *Town Planning Review*, vol 91:3 (Special Issues: Strategies of Land Policy for Urban Densification), doi: 10.3828/tpr.2020.18



**Abstract:** This article presents an investigation of how developers in Oslo, Norway, relate to and deal with negative covenants in densification projects. A densification project which is permissible under the zoning system and public-law provisions might simultaneously be in breach of the covenant system and private-law rules. As long as a negative covenant is not annulled in the event of a conflict between the covenant and project plan, it can prevent publicly approved development projects from going ahead.

The challenges associated with negative covenants and zoning plans, and thus the implementation of housing and densification policies, have been the subject of several Supreme Court decisions, concluding that the implementation of a zoning plan does not overrule negative covenants inconsistent with the public regulations. The article's most important finding is that the Norwegian system for dealing with covenants is costly in terms of time and resources, and creates unpredictability for rights holders and developers alike due to the risk of covenants being enforced. The biggest challenge is having two different systems working more or less independently of one another.



14. Sky, Per Kåre & Elvestad, helen E. (2020). Leasing of farmland and land consolidation, *FIG Peer Review Journal*.



**Abstract:** Leasing of farmland is increasing in Norway and is involving approximately 45 percent of the agricultural area in use. Active farmers are in need for more land,

because of technological and market forces tend to push a development towards fewer, bigger, and more efficient farms. This is not unique for Norway. It is global phenomenon. To get access to more land farmers lease land, but it is casual whom they lease from. That often causes fragmentation of leased farmland, with the consequence that the operating costs increases.

The Land Consolidation Act has measures that to some extent can solve this situation. The land consolidation court should consider leasing arrangements in the land consolidation area. If land consolidation affects a lessee or any other person with similar rights, the land consolidation court shall resolve the relationship between him and the owner if necessary. Until now, the measures in The Land Consolidation Act have not been used to great extent. There are at least three main possibilities to use land consolidation: One; the land consolidation court may allocate the leased farmland closer to the active farmers' operational farm centre. Two; allocate leased farmland at a central position in the land consolidation area so that many farmers will want to lease. Three; modify the properties so that the lessee got farmland as exchange for forest or outfield areas. These three fundamentally different ways of solving the problems are analysed and practical examples are shown.



**15.** Trygstad, Veronica (2020). Matrikkelføring av saker utført av jordskifteretten [Cadastral registration of cases conducted by the Land Consolidation Court], *Kart og Plan*, vol. 113:4.



**Abstract:** A survey from 2011 addressed which tasks should be emphasized in order to increase the quality of the cadaster in Norway. The survey showed, among other things, challenges related to cadastral registration of some cases conducted by the Land Consolidation Court. This article is based on 14 interviews. It reveals cadastral issues that may arise during the proceedings, from a party sending a case to the Land Consolidation Court to that case being closed and registered in the cadaster. The main findings are that cadastral issues that arise are particularly related to the poor quality of registered information in the cadaster from before the beginning of the case. Furthermore, the interviewees do not share the same understanding of the wording of Cadastral Regulation section 47 first paragraph, or the use of helplines to close a polygon. Clearer guidelines and dissemination of these may solve some of the problems.



16. Bergius, Mikael; Benjaminsen, Tor A; Maganga, Faustin; Buhaug, Halvard, 2020. Green economy, degradation narratives, and land-use conflicts in Tanzania. *World Development*, Vol. 129 (May). doi:10.1016/j.worlddev.2019.104850



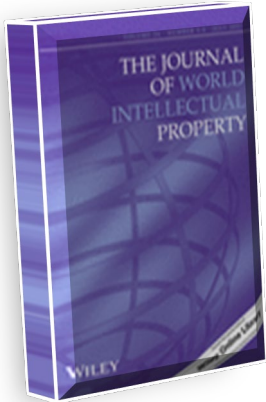
**Abstract:** The implementation of the green economy in Tanzania is currently re-arranging space in significant ways. The Southern Agricultural Growth Corridor of Tanzania (SAGCOT) has been presented by the government as well as investors and aid donors as a model for the green economy in Africa combining investments in large-scale farming with environmental conservation. The Kilombero valley is centrally situated within SAGCOT and has become a national hotspot of land-use conflicts. The valley is dominated by an expanding sector of agricultural capital investments combined with a substantial increase in areas under environmental conservation. While some smallholder farmers are dispossessed through these expansions, others are contracted as outgrowers. Pastoralists are, however, only in the way, and are also thought to cause

widespread environmental degradation. This is a long-held view, which also plays a key role in the implementation of SAGCOT. It has led to a series of pastoral evictions in the country.

In 2012, 'Operation Save Kilombero' was implemented consisting of violent evictions of all pastoralists from the valley. This eviction had been planned to conserve the wetland ecosystem that was seen by the government and aid donors to be threatened by pastoral overstocking. The arrival of the green economy in Kilombero re-enforced the perceived need to clear the valley of livestock and pastoralists to conserve the environment and make space for investments in agriculture. The pastoral eviction in Kilombero in 2012 was also only one in a series; every eviction leading to the spill-over of pastoralists to other areas creating new farmer-herder conflicts as well as conservation conflicts. While land-use conflicts in Africa are commonly thought to be caused by natural resource scarcity and environmental degradation mainly resulting from population growth, we demonstrate how degradation narratives may themselves be a key driver of conflicts, in this case to legitimize and pave the way for agricultural investments and environmental conservation under a 'green economy'.



17. Mulesa, Teshome Hunduma; Westengen, Ola, 2020. Against the grain? A historical institutional analysis of access governance of plant genetic resources for food and agriculture in Ethiopia. *Journal of World Intellectual Property*, Vol. 23: 82-120.

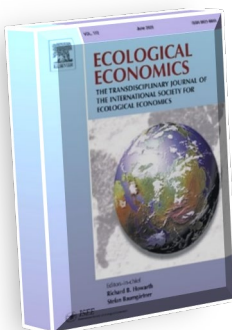


**Abstract:** Farmers' and breeders' access to a genetic diversity is essential for food system sustainability. The implementation of international agreements regulating access to plant genetic resources for food and agriculture (PGRFA) varies substantially between countries. Here, we examine why some countries implement a restrictive access governance regime, taking Ethiopia as a case. Drawing on commons theory and historical institutional analysis, we analyze historical, political, and economic factors that have shaped Ethiopia's access regime.

Based on interviews with key actors and stakeholders and document analysis, we identify three overarching ideational and material factors that can explain Ethiopia's current policy: (a) the influence of narratives about Ethiopia as a biodiversity treasure trove on the Ethiopian cultural identity; (b) the economic importance of agriculture based on PGRFA with origin in the country; and (c) the political influence of the genetic resource movement that promotes farmers' rights as a counter measure to stringent intellectual property rights (IPR), and on-farm PGRFA management as complimentary to ex situ conservation and formal seed system development. The Ethiopian case illustrates that countries' governance of access to PGRFA must be understood in connection with, and not in isolation from, IPR regimes and the historical, political, and cultural role of PGRFA in the country in question.



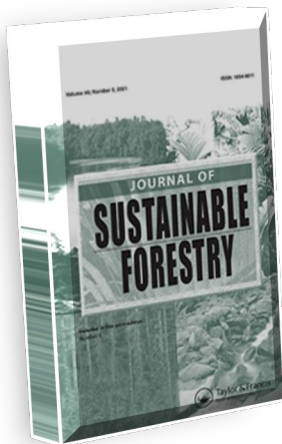
18. Vatn, Arild, 2020. Institutions for sustainability—Towards an expanded research program for ecological economics. *Ecological Economics*, Vol. 168: 1-9.



**Abstract:** Ecological economists are engaged in developing foundations for a sustainable future. To further develop our ability to deliver, I propose that we expand our analyses by a) drawing more on institutional theory and b) include also political processes in our research. The present political-economic system is unable to ensure sustainable futures. The paper argues that the root of the problem lies in its institutional structures. I illustrate possible changes to these that could take societies onto a sustainable development path. Focus here is on creating institutions able to strengthen the role of the future in decision-making. Here I focus on both political and economic institutions, illustrating

how a change in these could ensure sustainability. I also discuss changes in environmental regulation strategies. The analyses of different options are used to illustrate what kind of studies are needed to advance sustainability. They form the basis for specifying directions that ecological economics could take to further support a necessary societal transformation process.

**19.**Tadele M., Birhane E., Kidu G., G/wahid H. and Rannestad M.M. 2020. Contribution of Parkland Agroforestry in Meeting Fuel Wood Demand in the Dry lands of Tigray, Ethiopia. *Journal of Sustainable Forestry*, Vol. 39 (8).



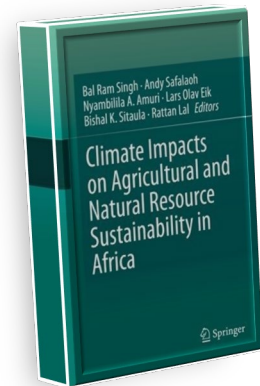
**Abstract:** Shortage of fuel wood is both the cause and the consequence of deforestation and degradation of most forests and woodlands in developing countries. Agroforestry can be a sustainable option to meet household fuel demand and thus reduce pressure on natural vegetation. This study assessed the contribution of Parkland agroforestry (PLAF) practice as an alternative source of fuel wood and the subsequent improvement in the livelihood of the users in Tigray, northern Ethiopia. Data on demographic and socioeconomic characteristics, major sources of energy, the perception and challenges of agroforestry development, and the time households spend on collecting fuel-wood were collected from 138 randomly selected PLAF user and non-user households using structured questionnaires.

The weekly consumption of fuel wood from different sources including PLAF was directly quantified using a weighing balance. Moreover, guided field observations, key informant interviews and focus group discussions were used to get in-depth information and triangulate the survey data. Data were analyzed using descriptive statistics. Propensity Score matching model was also used to analyze the contribution of PLAF to the livelihood of the small-scale farmers. The results showed that PLAF contributes about 109 ton of fuel wood annually in the study village, which is about 75% of the total energy demand of the village. The result of the Propensity Score Matching model also revealed that there was significant difference on the time they spent to collect fuel wood and income among the PLAF user and non-user households. Therefore, it can be concluded that scaling up the PLAF practice at small scale farming is an option for meeting the ever-increasing energy demand and improve the livelihoods of small-scale farmers.



## Books / e-Books

1. Bal Ram Singh, Andy Safalaoh, Nyambilila A. Amuri, Lars Olav Eik, Bishal K. Sitaula, Rattan Lal (2020) [Climate Impacts on Agricultural and Natural Resource Sustainability in Africa](#). Springer, Cham, doi: 10.1007/978-3-030-37537-9.



2. Stein T. Holden (2020). [Svein Ege \(Ed.\): Land Tenure Security. State-Peasant Relations in the Amhara Highlands, Ethiopia](#). James Currey . *Norwegian Anthropological Journal* , doi: 10.18261 / issn.1504-2898-2020-01-02-15



**Brief Introduction:** This book builds on ethnographic studies in selected sites in the Amhara Region in Ethiopia from the 1980s up to 2010. Svein Ege, a historian, is the editor of the book and the sole author of five out of nine chapters, and co-authors one chapter with Yigremedaw Adal. The other major contributor is Harald Aspen, an anthropologist, who is the sole author of the remaining three chapters. Kjell Havnevik has written a postface to the book, placing it into the broader context of peasant agriculture in Africa. Stein Holden makes a brief assessment of the book and its contributions to the literature based on his more than 25 years of research experience on land tenure issues in Ethiopia.

## CLTS Reports

1. Stein T. Holden, Mesfin Tilahun, Tobias Vorlauffer and Stefanie Engel. [The effects of gender empowerment training on within-group gender differences in performance and overall group performance: A Pre-Analysis Plan. CLTS Report No. 1/2020](#). Center for Land Tenure Studies, Norwegian University of Life Sciences, Aas, Norway

Brief introduction: This Pre-Analysis Plan is for a Randomized Control Trial (RCT) for recently formed youth business groups in Tigray Region of Ethiopia. Resource-poor rural youth are given a business opportunity by being allocated a rehabilitated land area where they can establish a joint business. They are organized as a primary cooperative and self-organize with a board of five members including a leader and a vice leader. The overall objective of the project is to identify factors that enhance the performance and sustainability of formal youth groups as a business and livelihood option. The project includes three RCTs and this registration is for one of these RCTs. This study is an RCT that aims to investigate the benefits of training elected female group members in this setting where male group members dominate as group board members and leaders in most groups. The training will consist of training in production planning and marketing and use of mobile phones for these purposes. An additional effect of the training is also to create social networks and professional contacts across groups among female members who receive the joint training.



Ethiopian culture is patriarchal, and people have traditionally been household heads and taken up almost all leadership positions in society. Recent legal reforms in the country have strengthened women's land rights (Holden et al. 2011). Less is known about the position of women in business. They are supposed to have equal rights to men as members of primary cooperative businesses that we study. However, they are outnumbered by men in such business groups (38% of members are women), are less likely to be board members (only 24% of female group members against 38% of male members are board members), and much less likely to be group leaders / vice group leaders (only 4% of females and 22% of males are in such positions) (Holden and Tilahun 2019b). Female group members are also less likely to own mobile phones (31% of female vs. 72% of male members (Holden and Tilahun 2019b)). Mobile phones are

instrumental in doing business such as marketing, organization of groups, and contacting authorities.

2. Erling Berge, Tomas Moe Skjølsvold, Henrik Wiig, Sverre Bjørnstad, Daimon Kambewa, Alister Munthali. [MALAWIAN LAND TENURE AND SOCIAL CAPITAL: Behaviour in trust games in 18 Malawian villages in 2007. CLTS Report No. 3/2020](#). Norwegian University of Life Sciences, Aas, Norway. Supplementary materials for the report can be [downloaded here](#).

Summary: This report presents two papers developed in order to study behaviour in trust games in 18 Malawian villages in 2007. In 2007-2008 the Malawian land tenure and social capital project (financed by Norwegian Research Council), interviewed households on many subjects deemed relevant to land tenure and social capital. Interviews were conducted in selected villages with 6 in each of the regions North, Central, and South. The interviews included 13 questions about trust, trustworthiness, and social capital. The first paper in the report uses factor analysis to study the 78 variables that came out of the 13 questions about trust, trustworthiness, and social capital. The intention is to develop indexes that may be used to study outcomes from the trust games. The second paper in the report details the adaptation of the data that were needed in order to link the game results to the interview data. In this paper, 204 games that could be linked to the interview data.



## CLTS Papers statistics at S-WoPEc and RePEc

S-WoPEc acts as a clearing house and central repository for bibliographic data about Nordic working papers in Economics. CLTS working papers are also available in electronic form and can be downloaded from S-WoPEc. S-WoPEc is part of RePEc (Research Papers in Economics), an online platform with an effort to coordinate the dissemination of information about Working Papers in Economics. Based on RePEc statistics, Table 1 and Figure 1 shows that the total number of abstract views and downloads in 2020 were 1,371 and 346, respectively. The abstract views in 2020 increased by 11 percent compared to 2019. On the contrary, the number of downloads reduced by 25 percent in 2020 compared to 2019. In recent years, Figure 1 shows an increasing trend in abstract views that is higher than the trend in file downloads. Since 2012, visibility of CLTS work continues to increase mainly through abstract views.

Table 1. CLTS Visibility statistics from RePec in 2019 and 2020

Month	Abstract Views			Downloads		
	2019	2020	Change	2019	2020	Change
January	62	187	67%	54	36	-50%
February	55	111	50%	18	33	45%
March	60	112	46%	14	53	74%
April	99	129	23%	39	26	-50%
May	87	113	23%	58	29	-100%
June	65	124	48%	29	37	22%
July	55	90	39%	24	19	-26%
August	111	111	0%	28	18	-56%
September	89	101	12%	24	25	4%
October	175	109	-61%	71	31	-129%
November	222	83	-167%	40	20	-100%
December	160	101	-58%	34	19	-79%
<b>Total</b>	<b>1240</b>	<b>1371</b>	<b>11%</b>	<b>433</b>	<b>346</b>	<b>-25%</b>

\*Downloads are the files downloaded from RePec.

Source: RePec

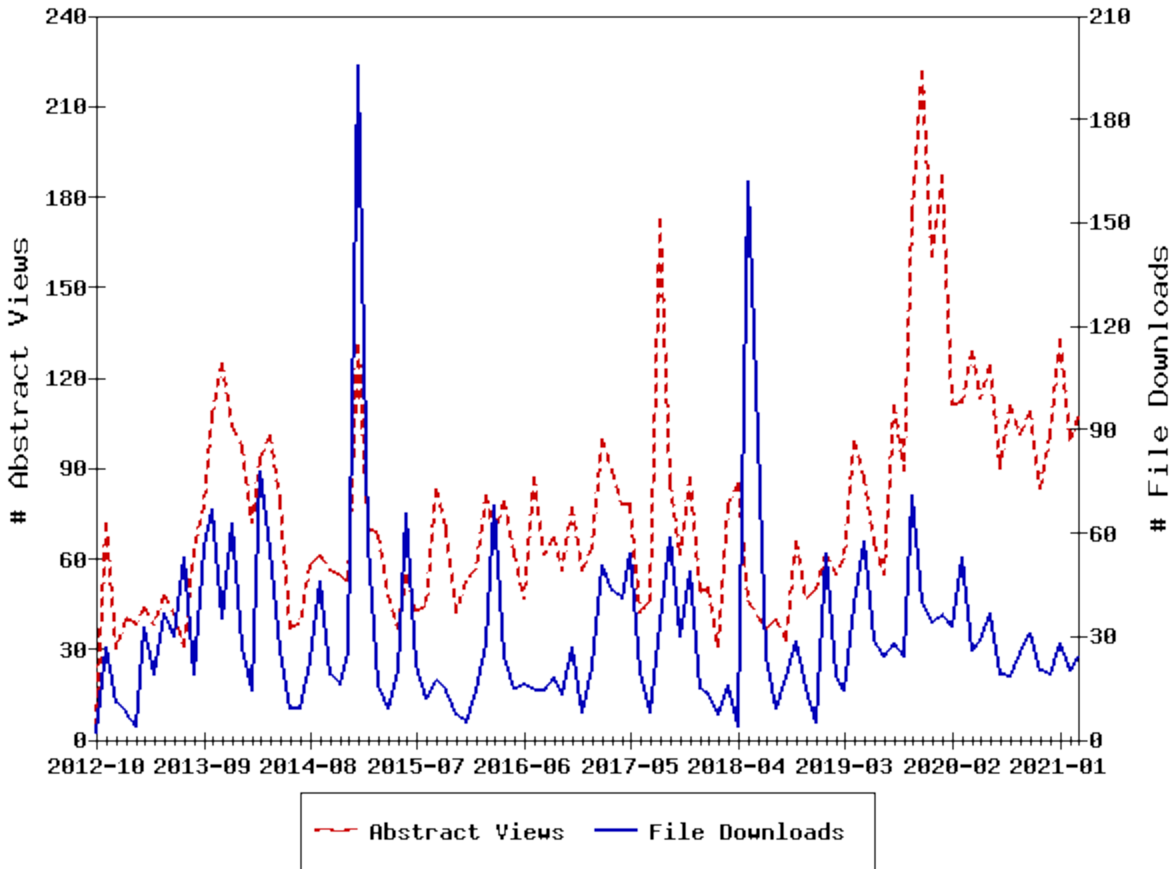


Figure 1. CLTS Visibility statistics from RePec 2012 to 2020

## Conference presentations and workshops

1. Presentation: "[Lifting barriers for youth access to land: - The Ethiopian Experiences](#)", by Stein Holden at the UN-Habitat meeting in Oslo on January 30th, 2020.



**Brief:** The Global Land Tool Network (GLTN) of UN-Habitat, in partnership with the Norwegian Mapping Authority (NMA) and Habitat Norway (HN), held meeting/workshop on the theme "[Commitment to Action: Land and Property Rights for Sustainable Development](#)", on 30th January 2020. The event was organised to mark the global partnership entry into the "SDG Action Decade towards 2030". NMBU and Centre for Land Tenure Studies (CLTS) have collaborated with GLTN since 2007 and carried out studies on land rights and gender, tenure



security, climate change and property rights, and youth and land access. The presentation gave an overview of collaboration related to youth and land access and more recent research on a new policy initiative to allocate rehabilitated communal land to youth business groups. This work has been funded by NORAD and the Research Council of Norway.

2. Presentation: "[Youth Business Groups for Sustainable Development: - Lessons from the Ethiopian Model](#)", by Stein Holden at the Meeting with the Rector and Prorektors at the School of Economics and Business, NMBU, 29th January 2020.



**Brief:** The presentation highlighted how the new research project funded under the NORGLOBAL2 program of the Research Council of Norway is associated with the Sustainable Development Goals, the objectives of the project, partners, methods and some early findings of the project which started in 2019 and will end in 2022.

3. The UN-Habitat Workshop report on "[Land and Property Rights for Sustainable Development](#)" held on January 30th, 2020 in Oslo, Norway is now available.



**Brief:** On 30 January 2020, the Global Land Tool Network (GLTN) in partnership with the United Nations Human Settlement Programme (UN-Habitat), the Norwegian Mapping Authority (NMA) and Habitat Norway (HN) organized a workshop on "Land and Property Rights for Sustainable Development". The event marked the global partnership entry into the "SDG Action Decade towards 2030". It was also the first activity organized under the new agreement of co-operation between the NMA and HN. The workshop highlighted practical cases and approaches to address emerging challenges in the land eco-system (conflict,

displacement, climate change). With the purpose to ensure tenure security for all within the framework of the SDGs from technologically advanced information systems to concrete experiences and practices in the field. NMBU and Centre for Land Tenure Studies (CLTS) contributed to this workshop. From NMBU, Prof. Stein Holden gave one of the presentations and Prof. Arild Angelsen commented on one of the presentations. Their contributions are now available in the workshop report available on this link: <http://habitat-norge.org/workshop-report-land-and-property-rights/>.

## CLTS Websites

- The activities of the centre are documented at the website [www.nmbu.no/clts](http://www.nmbu.no/clts).
- Our main page is in English, but we also have a Norwegian website:
- <https://www.nmbu.no/fakultet/hh/forskning/forskningscentre/clts>, where research and activities are published in Norwegian.

## Brage

All of CLTS Working Papers and Reports can be obtained in Brage:

- **CLTS Working Papers:** <https://nmbu.brage.unit.no/nmbu-mlui/handle/11250/2446458>
- **CLTS Reports:** <https://nmbu.brage.unit.no/nmbu-xmlui/handle/11250/2446455>

## LandPortal

- The CLTS research work is also accessible through the Landportal webpage: <https://landportal.org/organization/centre-land-tenure-studies>