

RESUME: AYNALEM ADUGNA

Research Scientist III

California Department of Public Health

Founder and host of www.EthioDemographyAndHealth.org

EDUCATION

Institution	Major	Degree awarded
Addis Ababa University	Geography (With Distinction)	BA
University of Durham (UK)	Population Geography (UNFPA fellowship)	MA
University of London	Medical Demography (UNFPA fellowship)	PhD
Sonoma State University, California	Geographic Information System (GIS) and advanced GIS using ArcGIS Pro, ArcCatalogue, and ArcTools (2 semesters, 2008/09)	
Sonoma State University, California	Remote Sensing and Digital Image Interpretation using the ERDAS IMAGINE software (1 semester, 2009)	
Solano Community College, California	College mathematics and statistics (2010 - 2012)	Transcript
Sacramento State University California	Health and Human Services Agency (HHSA) Supervisor Training (2015/16)	Certificate
University of California, Davis	Mid-level manager training (2016/17)	Certificate
SAS Institute	SAS Level I	Certificate
ESRI	ArcGIS Level III, Spatial Statistics	Certificate
ESRI	ArcGIS Level IV, Interactive Web Maps	Certificate
Microsoft	Excel Level 2,3; Access Level 2, 3	Certificate

EMPLOYMENT

1. California Department of Public Health Services CDPH (September 1, 2021 – Present)
2. California Department of Social Services CDSS (January 2013 – May 2021)
3. Sonoma State University (August 1992 – December 2012), Adjunct Faculty (January 2013 to present)
-
4. Adjunct faculty – Addis Ababa University (December 2008 – present)
5. Adjunct faculty – Addis Continental Institute of Public Health – (October 2014 – present)

Current responsibilities at the California Department of Public Health, Office of Equity (OHE) and Health Equity Research and Statistics Section (HERSS)

- Managing the Office of Health Equity (OHE) Healthy Communities Data and Indicators Project (HCI).
- Coordinating the collaboration and mutual technical assistance among the health equity-focused data workgroups in the Department, including the Let's Get Healthy California (LGHC) data team, as well as other data initiatives by the Fusion Center (Strategic Development and External Relations) and the Center for Health Statistics and Informatics.
- Planning, contributing to, and tracking the development of indicator datasets and related analytics, and mentoring junior-level scientific staff in HRSU.
- Working independently and with other Research Scientists to plan and perform statistical analyses for the healthy Communities Indicators with a focus on disparities in health and social determinants of health by race/ethnicity, gender, age group, income level, region, and other dimensions of inequality.
- Maintaining expertise in the use of applications for data management, analysis, and visualization, such as R and R Studio, SAS, Tableau, and ArcGIS Pro.
- Researching, developing, and disseminating health equity-focused indicator data tools, fact sheets, slide sets, and dashboards
- Writing and editing data briefs, and producing other data products.

Previous Responsibilities at the California Department of Social Services (CDSS)

- Managing 15 staff of the Federal Reporting and Monitoring Section in the Research Services Branch, California Department of Social Services
- The CalFresh participation project and ad hoc research; geocoding CalFresh addresses for spatial analysis
- Developing methodologies for measuring CalFresh and creating procedures for data import (ACS, US Census, LA County Shapefiles) for an eventual merge with CDSS data
- Customizing GIS (Geographic Information System) procedures to suit CDSS data analysis and mapping needs
- Presenting findings to the Executive Management
- Presenting the CalFresh participation methodologies to outside agencies including California counties, PPIC, UC Davis, and EDD for review and comments as well as to the California Food Policy Advocates
- Ad hoc research: reviewing methodologies and results of state- and national-level studies on eligibility for benefits, program participation, program effectiveness, child fatality/near fatality, and other topics

Previous Employment

Sonoma State University (August 1992 - December 2012)

Responsibilities at Sonoma State University

- Teaching upper division courses (Population Geography, Medical Geography, Social Geography, Cultural Geography)
- Advising students on:

- Research Methods
- Sampling techniques and sample design
- Data collection and analysis

Adjunct status

- **Sonoma State University, California**
- **Addis Ababa University, Addis Ababa**
- **Addis Continental School of Public Health, Addis Ababa**

Responsibilities at Addis Ababa University

- Teaching two postgraduate courses – 1) Population, Nutrition, and Health, and 2) Migration and Urbanization - at the Center for Population Studies
- Guiding graduate research in population, medical geography nutrition, and urbanization
- Supervising PhD thesis – demography. Medical geography, and public health

Other academic duties

Founder and host of www.EthioDemographyAndhealth.org

Reviewer: African Geographical Review, an online journal

Reviewer: African Identities, Routledge

Reviewer: BMC Pediatrics

Reviewer: Journal of Health, Population, and Nutrition

Professional Associations:

- **PAA, Population Association of America (<https://www.populationassociation.org/>)**
- **AAG, Association of American Geographers (<https://www.aag.org/>)**
- **APHA, American Public Health Association (<https://www.apha.org/>)**
- **ESAN, Ethiopian Scientific and Academic Network (<https://esannet.com/>)**

AWARDS

United Nations Fellowship to study demography at Masters level

United Nations Fellowship to study demography at Ph.D. level

California Department of Social Services (CDSS) Service Excellence Award (2017)

California Department of Social Services (CDSS) Service Excellence Award (2018)

PROFESSIONAL SUMMARY

- More 10 years' experience in scientific research and statistics with several publications in peer-reviewed journals
- More than 10 years working independently as a lead researcher as well as in a team setting in the field of Geographic Information System (GIS) and locational business

intelligence.

- Extensive experience in the use of ArcGIS applications to solve real issues of significant concern for the California Department of Social Services
- Extensive experience in the use of ArcGIS applications to solve population distribution and redistribution issues faced by the government of Ethiopia, including GIS applications to identify areas suitable for population resettlement.
- Extensive experience sharing the value of GIS in solving welfare issues in California through presentations at the County Welfare Directors Association (CWDA) meetings
- Extensive experience in the application of new GIS tools including ESRI's Operational Dashboard application and Insight for ArcGIS
- Extensive experience teaching statistical survey research methods (Sonoma State University)
- More than 10 years' experience teaching undergraduate and graduate courses in Quantitative Methods for Geographers, Population Geography, Medical Geography, Social Geography, Cultural Geography, Population Nutrition and Health, as well as Migration and Urbanization (Sonoma State University, Addis Ababa University)
- Extensive research experience working with census and survey data including demographic and health surveys and the American Community Survey (ACS) data.
- Serving as both a researcher and manager in state service, and experience working with confidential information and personally identifiable (PI) data as well as the state's main data systems including the Medical Eligibility Data System (MEDS) and Statewide Automated Welfare System (SAWS)
- Serving as reviewer for the African Geographical Review – an online journal publication.
- Serving as research advisor to graduate students in demography (Addis Ababa University)
- Great expertise in ESRI's ArcGIS Pro, R-Programming, Python for GIS, Microsoft Excel, Word, and PowerPoint skills and good working knowledge of SAS, STATA, SPSS and some knowledge of Tableau
- Strong planning, prioritizing, and organizational skills with innovative approach to problem solving and willingness to go the extra mile to complete tasks on time and often ahead of schedule

Written/verbal COMMUNICATION/PRESENTATION SKILLS

- Published a number of journal articles and presented my research findings, including the mathematics behind a new measure of welfare (CalFresh) participation, at the California Health and Human Services Agency (CHHSA) conferences, 22 California County Health and Human Services forums, the California Welfare Directors Association (CWDA) annual conferences, and to the California Department of Social Services (CDSS) executives including the Director (on many occasions), and at University of California Davis (UCD)
- Taught four upper division college classes at Sonoma State University for more than 10 years with great presentation skills and mastery of all subject matters contained in seven college courses

INTERPERSONAL

- I am a great listener! I listen attentively to inquiries and concerns and implement

- problem-solving skills as needed.
- I provide outstanding service to clients at all times including under tight time constraints.
- I have developed mutually respectful professional relationships with numerous individuals and groups to facilitate collaboration on various research projects I have participated in.

RECENT PUBLICATIONS

- Fekadu H, Mekonnen W, Adugna A, Kloos H, Hailemariam D. Barriers to equitable healthcare services for under-five children in Ethiopia: a qualitative exploratory study. BMC Health Serv Res 24, 613 (2024). <https://doi.org/10.1186/s12913-024-11074-0>
- Fekadu H, Mekonnen W, Adugna A, Kloos H, Hailemariam D. Inequities and trends of polio immunization among children aged 12–23 months in Ethiopia: a multilevel analysis of Ethiopian demographic and health survey. BMJ Open 2024;14:e079570. <https://doi:10.1136/bmjopen-2023-079570>
- Aynalem Adugna (2023) The Social Geography of Women’s Attitudes toward Wife-beating in Ethiopia: A Contribution Towards Proper Application of Spatial Statistics Journal of Geography and Geology, Vol15, No 2. Published by Canadian Center of Science and Education <https://ccsenet.org/journal/index.php/jgg/article/view/0/49259>
- Aynalem Adugna (2022) COVID-19 in Ethiopia: A Regional Geographical Analysis and Examination of Complex Interactions between a Pandemic, Geopolitics, Domestic War, Drought, and Poverty, Journal of Geography and Geology, Vol. 14, No. 2 <https://ccsenet.org/journal/index.php/jgg/article/view/0/47403>
- Aynalem Adugna (2019) Ethiopia 2050: Socioeconomic Challenges and Demographic Trends (unpublished manuscript). http://ethiodemographyandhealth.homestead.com/Aynalem_Adugna_Ethiopia_2050_Article.pdf
- Aynalem Adugna (2019) Regional Economic Favoritism and Redistributive Politics as a Public Good: The Case of Tigray Region in Northern Ethiopia; Accepted for publication, Canadian Vol. 11, No. 1 (2019) <https://ccsenet.org/journal/index.php/jgg/article/view/0/38588>
- Aynalem Adugna (2018) Determinants of the Number of Children Born to Reproductive Women in Ethiopia: Sampling Cluster Based National Spatial Analysis of the 2016 Demographic and Health Survey Data. Accepted for publication by Journal of Geography and Geology; Vol. 10, No. 4; 2018 ISSN 1916-9779 E-ISSN 1916-9787 Published by Canadian Center of Science and Education. <https://www.ccsenet.org/journal/index.php/jgg/article/view/0/37556>

- Worku Legese, Getnet Tadele, Aynalem Adugna and Helmut Kloos, A Neglected Resource in Community Development: Participation of Ethiopian Academics in the Development of their Communities, Environment and Natural Resources Research; Vol. 8, No. 2; 2018 ISSN 1927-0488 E-ISSN 1927-0496 Published by Canadian Center of Science and Education
- Robert Bergguist, Helmut Kloos and Aynalem Adugna, in Schistosomiasis: Paleopathological Perspectives and Historical Notes. In: Barrie Jamison (ed.), Schistosoma: Biology, Pathology and Control. Pp. 8-33. Baton Rouge, CRC Press, 2017.
- Aynalem Adugna and Helmut Kloos (2016) *The Relationship between Resettlement and Birth Rates: The Case of Gambella, Ethiopia*; Ethiopian Journal of Health Sciences, 2016 Jul; 26(4): 359–368.
- Aynalem Adugna and Helmut Kloos and Terefe Degefa. *Evaluation of the 2007 Ethiopian Census Data, with an Emphasis on Coverage in the Amhara Region*. Ethiopian Journal of Development Research, Vol. 36, Number 1, 2014
- Aynalem Adugna. *Planned Resettlement: A GIS-Assisted Identification of Areas Suitable for Irrigation-Based Resettlement in Ethiopia*. African Geographical Review; 2011, Vol. 30 Issue 2, p71-91
- Aynalem Adugna and Assefa Hailamariam (2011), “*Urban-Rural Linkages in Ethiopia*” In Charles Teller and Assefa Hailemariam (eds.) *The Demographic Transition and Development In Sub-Saharan Africa: The Unique Case of Ethiopia*. Springer.
- Assefa Hailamariam and Aynalem Adugna (2011), “*Migration and Urbanization in Ethiopia*”. In Charles Teller and Assefa Hailemariam (eds.) *The Demographic Transition and Development In Sub-Saharan Africa: The Unique Case of Ethiopia*. Springer.
- Helmut Kloos, Yibeltal Assefa, Aynalem Adugna, Mesfin Samuel Mulatu, Damen Haile Mariam. Utilization of antiretroviral treatment in Ethiopia between February and December 2006: spatial, temporal, and demographic patterns. *International Journal of Health Geographics* 2007, 6:45 (25 September 2007)
- H. Kloos, J. Lautze, A. Adugna and W. Legesse, Water resources and their management in the Nile Basin. In: H. Kloos and W. Legesse (eds.), *Water Resources Management in Ethiopia: Implications for the Nile Basin*. Cambria Press, Amherst (in press).
- Melaku Getachew, Argaw Ambelu, Seid Tiku, Worku Legesse, Aynalem Adugna & Helmut Kloos. Ecological Assessment of Cheffa Wetland in the Borkena valley, Northeast Ethiopia. *Ecological Indicators* 15 (2012) 63–71
- Helmut Kloos, Assefa Hailemariam and Aynalem Adugna. *Population*. In Yemane Berhane, Damen Hailemariam and Helmut Kloos. Eds. *The Epidemiology and Ecology of Health and Disease in Ethiopia*. Shama Books. Addis Ababa. 2006.

• PREVIOUS PUBLICATIONS

- Aynalem Adugna and Kloos, Helmut. Two population distribution maps for Ethiopia based on the 1984 census. *Northeast African Studies*, Vol. 9, No. 1, 1987. 89-95 pp. East

Lansing, Michigan.

- Aynalem Adugna. The 1984 Drought and Settler Migration. Clarke, John I., Curson Peter, Kavastha, S.L. Nag, Prithish (Eds.) Population and Disaster. 1989
- Helmut Kloos and Aynalem Adugna. The Ethiopian Population: Growth and Distribution. *The Geographical Journal*: Vol 155, No. March 1989, pp. 33-51
- Helmut Kloos and Aynalem Adugna. Settler Migration During the 1984/85 Famine in Ethiopia. *GeoJournal* 19.2, 1989. PP 113-127
- Adugna, A. (1987). The population of Ethiopia. Institute of Development Research, Addis Ababa University.

UNPUBLISHED works

The Spatial Patterns of the Ethiopian Population, MA Thesis, University of Durham, England

The Impact of Migration on Fertility and Mortality in Addis Ababa, Ethiopia, PhD. Thesis, University of London, England