

Metadata for the Volta Basin

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List of abbreviations

AFSIS	Africa Soil Information Service
AVG	Average
BFP	Basin Focal Project
BGS	British Geological Survey
CBO	Community Based Organisation
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CGD	Centre pour la Gouvernance Démocratique Burkina Faso
CGIAR	Consultative Group on International Agricultural Research
CHPS	Community-Based Health Planning and Services
CPWF	Challenge Program on Water and Food
CSPS	Centre de Santé et de Promotion Sociale
CUA	Credit Union Association of Ghana
DGIRH	Direction Générale des Inventaires et des Ressources Hydrauliques
DGPER	Direction Générale de la Promotion de l'Économie Rurale
DGPSA	Direction Générale des Prévisions et des Statistiques Agricoles (Burkina Faso)
DGRE	Direction Générale des Ressources en Eau
DFID	Department for International Development (UK)
DHS	Demographic and Health Survey
DPSAA	Direction de la Prospective et des Statistiques Agricoles et Alimentaires
EC	Electoral Commission
EDS	Enquête démographique et de santé 2003 (Burkina Faso)
EDSBF-MICS IV	Fourth Enquête Démographique et de Santé et à Indicateurs Multiples (Burkina Faso)
ENSA	Enquête Nationale de Statistique Agricole (Burkina Faso)
FAO	Food and Agricultural Organisation of the United Nations
GHS	Ghana Health Service
GIS	Geographical Information Systems
GLSS	Ghana Living Standards Survey
GSS	Ghana Statistical Services
HIV	Human Immunodeficiency Virus
IFPRI	International Food Policy Research Institute
INSD	Institut National de la Statistique et de la Démographie (Burkina Faso)
IP	Intellectual Property
IRD	L'Institut de Recherche pour le Développement
ISRIC	International Soil Reference and Information Centre
JRC	Joint Research Centre
MAR	Mean Annual Rainfall
MARA	Ministère de l'Agriculture et des Ressources Animales (Burkina Faso)
MAHRH	Ministère de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques
MFI	Micro-Finance Institution
MOH	Ministry of Health (Ghana)
NERC	Natural Environment Research Council
ONAPAD	Observatoire National de la Pauvreté et du Développement

QUIBB	Enquête Annuelle sur les Conditions de Vie des Ménages au Burkina Faso, Enquête Annuelle avec le Questionnaire Unifié des Indicateurs de Base du Bien Être (Burkina Faso)
RGA	Recensement Général de l'Agriculture
RGPH	Recensement General de la population et de l'habitation
SOC	Soil Organic Carbon
TAGMI	Targeting AGwater Management Interventions
TB	Tuberculosis
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VBA	Volta Basin Authority
WFP	World Food Programme
WGHTD	Weighted
WHO	World Health Organisation

Spatial definition of study/focus area

Choice of districts to include in each country – using latest boundary demarcations, and including all districts that fall wholly or mostly in the Volta River Basin according to GIS overlay of the river basin over district boundaries.

Burkina Faso	Ghana
Region Province (# districts)	Region # districts
Boucle du Mouhoun Bale (10) Mouhoun (7) Banwa (6) Nayala (6) Kossi (9) Sourou (8)	Greater Accra 2 districts
Cascades Comoe (5)	Volta 15 districts
Centre Kadiogo (7)	Eastern 12 districts
Centre-Est Boulgou (13) Kouritenga (7) Koulpelogo (8)	Ashanti 12 districts
Centre-Nord Bam (9) Sanmatenga (10) Namantenga (1)	Brong Ahafo 16 districts
Centre-Ouest Boulkiemde (15) Sissili (7) Sanguie (10) Ziro (6)	Northern 20 districts
Centre-Sud Bazega (7) Zoundweogo (7) Nahouri (5)	Upper East 9 districts
Est Gourma (5) Tapoa (6) Kompienga (3)	Upper West 9 districts
Hauts-Bassins Houet (13) Tuy (7) Kenedougou (9)	
Nord Loroum (2) Yatenga (13) Passore (9) Zondoma (5)	
Plateau-Central Ganzourgou (8) Oubritenga (7) Kourweogo (5)	
Sahel Soum (3)	
Sud-Ouest Bougouriba (5) Noumbiel (5) Ioba (8) Poni (9)	

Note on data processing

Methodology

There are two parts to processing the data before entering it into the TAGMI database :

- 1) Extracting data from publicly available sources, and processing it into relevant indicators for the tool. This methodology is described for each indicator in the following document.
- 2) Transforming the numerical data into the format required by the TAGMI tool. This is the same methodology for all indicators, except Mean Annual Rainfall.
 - a. All indicators : data values were classified into three categories (low/med/high) such that a roughly equal number of districts fall into each category (using Hierarchical-Equal Count discretisation function in GeNIe for 3 classes)
 - b. Mean Annual Rainfall: for **Soil and Water Conservation (SWC)**, rainfall range classes were set for the whole basin based on Mati et al (2006), not according to the range of values within each country (with the rationale that at **Low** rainfall, as below, SWC structures are very important for conserving water; at **Med** rainfall SWC structures are somewhat good for managing water in situ, but at **High** rainfall, SWC structures will cause waterlogging and have a negative effect):
 - i. **Low** rainfall: 200-750mm average per district
 - ii. **Med** rainfall: 750 - 1200mm average per district
 - iii. **High** rainfall: >1200mm average per district
 - c. Mean Annual Rainfall: for **Small scale irrigation** and **Small Reservoirs**, the data was treated as for All indicators

Hydrological and administrative boundaries

The project is targeted at the river basin (hydrological area). Yet, for many users, the administrative boundaries of the districts and provinces are more relevant. Therefore, the data is compiled for the tool according to administrative boundaries.

However, spatial data (e.g. distance to rivers and roads) has been calculated within the hydrological area of the river basin only, and thus for districts which fall only partially in the river basin, the data only relates to those parts within the river basin (e.g. 'proximity to roads' refers only to the roads and district area within the hydrological limit of the basin).

Secondary data extracted directly from publications refers to the administrative boundary area.

Water resources

Characteristics of water resources that describe availability, access and quality of the water.

Water availability

D_MAR

Indicator name	Mean annual rainfall (mm)		
Variable(s)	D_MARmin D_MARavg		
Definition	Longterm average annual rainfall (mm) (1901-2005). (aggregation type: AVG) - minimum and average MAR per district		
Data Source	Harvest Choice, available at: http://harvestchoice.org/data/longterm-average-annual-rainfall-mm (Accessed June 2013) Sourced from: University of East Anglia Climatic Research Unit (CRU). [Phil Jones, Ian Harris]. CRU Time Series (TS) high resolution gridded datasets. NCAS British Atmospheric Data Centre. Available from http://badc.nerc.ac.uk/data/cru (Accessed on 1 May 2011).		
Sample size	West Africa, East & Central Africa, Southern Africa		
Spatial scale	1 km grid cells, recalculated to district level (average value)		
Year of data	1901 - 2005		
Year of publication	2011		
Methodology	*same procedure as for D_cattle_dens*: <ul style="list-style-type: none"> • Ensure raster is projected correctly - check that it lines up with a correctly projected layer • Run "Zonal statistics as table" (Spatial Analyst Tools\Zonal) • Set All Districts_Hydro as input raster or feature zone data • Set "District" as zone field • Set MAR layer as input raster or feature data class • Set "Value" as class field • Export table of attributes as a .dbf file – Open in Excel • Extract from data table MINIMUM and MEAN values 		
Copyright	© HarvestChoice, 2006-2013/International Food Policy Research Institute (IFPRI): For personal use and non-commercial purposes: permission is granted to download and copy and to redistribute information and articles – and data subject to the User License – provided that this is not for profit, no text is changed, and the designated copyright notice and source details remain with any material obtained from the site. For material generated by HarvestChoice, the designated copyright notice is © HarvestChoice, 2006-2013. For any reuse or distribution, you must make clear to others the license terms of this work. The best way to do so is with a link to this web page.		
Present in:	Burkina Faso	x	Ghana
Additional Information	x		

Access to water

D_prox_riv

Indicator name	Proximity to a river			
Variable(s)	D_prox_riv			
Definition	% of district area lying within 1 km of a perennial river			
Data Source	CPWF Phase 1 data collection - Perennial and ephemeral river networks			
Sample size	n/a			
Spatial scale	Volta basin, Limpopo Basin			
Year of data				
Year of publication				
Methodology	Ensure layer is projected correctly Create 1km buffer around rivers Calculate area within buffer, divide by total district area, multiply by 100			
Copyright	CPWF 2008-2011			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_watertable

Indicator name	Depth to water table			
Variable(s)	D_watertable			
Definition	Estimated depth to groundwater (mbgl - metres below ground level)			
Data Source	'BGS Quantitative maps of groundwater resources in Africa' Available at: http://www.bgs.ac.uk/gwresilience/			
Sample size	Africa			
Spatial scale	5 km grid			
Year of data				
Year of publication	2012			
Methodology	Import text file with point locations into ArcGIS, Display X-Y data and convert to shapefile Convert point shapefile to raster, project to same as the district boundaries Run Spatial Analysis-Zonal-Zonal statistics as table - Note: values are discrete categories:- 0 = SM = 25 - 50 1 = VS = 0 - 7 2 = VD = >250 3 = M = 50 - 100 4 = S = 7 - 25 5 = D = 100 - 250 Use MAJORITY column for D_watertable, which reflects the most common water table depth class in the district			
Copyright	Based upon mapping provided by British Geological Survey © NERC 2012. All rights reserved			
Present in:	Burkina Faso	x	Ghana	x
Additional Information	Terms of use: Following extensive review, the British Geological Survey (BGS), a component			

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D_surf_water

Indicator name	Surface water nearby
Variable(s)	D_surf_water
Definition	Density of reservoirs per district
Data Source	<p>Burkina Faso: de Condappa, D, I. Terrasson and J. Lemoalle. 2008. [CD] <i>BFP VOLTA Data Volume</i>, IRD & CGIAR-CPWF</p> <p>- All Burkina Faso reservoirs from BFP VOLTA Data Volume Disc, based on data from DGRE/MAHRH</p> <p>Ghana: Upper West Region reservoirs from CPWF Volta Basin Project Phase 1 Upper East Region reservoirs from CPWF Volta Basin Project Phase 1</p>
Sample size	All of Burkina Faso, Upper East and Upper West regions of Ghana
Spatial scale	District
Year of data	
Year of publication	2011
Methodology	In ArcGIS, using Burkina Faso departements and Ghana districts polygon layers, use Hawth's Tools - Analysis tools - Count points in polygon -> gives the number

	of reservoirs per district Calculate the number of reservoirs divided by district area			
Copyright	CPWF, VBA			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_water_infr *

Indicator name	Access to storage water infrastructure (e.g. rainwater harvesting tanks, shallow wells, boreholes, small ponds etc.)			
Variable(s)	D_water_infr			
Definition				
Data Source				
Sample size				
Spatial scale				
Year of data				
Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

D_wpermit*

Indicator name	Have water permits			
Variable(s)	D_wpermit			
Definition				
Data Source				
Sample size				
Spatial scale				
Year of data				
Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

Water quality

D_salinity*

Indicator name	Salinity			
Variable(s)	D_salinity			
Definition				
Data Source				

Sample size			
Spatial scale			
Year of data			
Year of publication			
Methodology			
Copyright			
Present in:	Burkina Faso		Ghana
Additional Information			

Social capital

“the social resources upon which people draw in pursuit of their livelihood objectives” (DFID, 1999), typically described in terms of **networks and connectedness, membership of more formalised groups and relationships of trust, reciprocity and exchanges.**

Organisational capacity

The organisational and leadership/management capacity that allow for effective networks and connectedness, running of community activities and providing a means of conflict management.

D_numCBOs

Indicator name	Number of community organisations			
Variable(s)	D_numCBOs			
Definition	<p>The number of community-based organisations (CBOs), non-profit organisations and/or religious organisations present in the district, per 1000 population.</p> <p>Ghana: Represented by: D_avail_MFI – number of credit unions in the district per 1000, which represent a portion of all community organisations</p> <p>Burkina Faso: Proportion of households (%) whose head of household belongs to an association or organisation</p>			
Data Source	<p>Ghana: CUA-Ghana, 2010. Credit Union Association of Ghana Data on credit unions for 2010. Available from: http://www.cuagh.com/facts-dates/facts-figures, accessed March 2013; GSS, 2012. 2010 Population and Housing Census: Summary report of final results, Accra. Available at: http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf, accessed October 2012</p> <p>Burkina Faso: CountrySTAT Burkina Faso - Indicateurs de Base du bien être national par region et selon le sexe par Indicateur, Sexe et Region, Table 150 (EA QUIBB 2007), http://countrystat.org/home.aspx?c=BFA, accessed October 2012</p>			
Sample size	<p>Ghana: All registered credit unions in Ghana</p> <p>Burkina Faso: 8500 households</p>			
Spatial scale	<p>Ghana: Region</p> <p>Burkina Faso: Region</p>			
Year of data	<p>Ghana: 2010 (CUA & GSS)</p> <p>Burkina Faso: 2007</p>			
Year of publication	<p>Ghana: 2010 (CUA); 2012 (GSS)</p> <p>Burkina Faso: 2007</p>			
Methodology	<p>Ghana: Number of credit unions (taken from CUA-Ghana, 2010) divided by number of households (taken from 2010 census) multiplied by 1000</p> <p>Burkina Faso: Taken directly from source</p>			
Copyright	<p>Ghana: CUA, Ghana; GSS</p> <p>Burkina Faso: INSD</p>			
Present in:	Burkina Faso	x	Ghana	x

Additional Information	
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D_voting

Indicator name	Voting turnout		
Variable(s)	D_voting		
Definition	Proportion of the voting population (%) who voted in the last government elections (Ghana: 2000; Burkina Faso: May 2007)		
Data Source	<p>Ghana: EC, 200? <i>Voter turnout in general elections from 1992 – 2000</i>, http://www.ec.gov.gh/assets/file/voteturnout%2092%2096%20%2000%20ELECTION%20RESULTS%281%29.pdf; Comparative statistics of General Elections turnout in Ghana http://results.ec.gov.gh/assets/VOTER%20TURNOUT%20%20FROM%201969%20TO%202008.pdf</p> <p>Burkina Faso: CGD, 2008. Graphique 8: Participation aux élections de mai 2007 par region (p15) in: <i>La participation électorale au Burkina Faso: Analyse quantitative et qualitative</i>. Centre pour la Gouvernance Démocratique Burkina Faso http://www.maep.bf/gestdoc/uploads/51.pdf</p>		
Sample size	Registered voters		
Spatial scale	<p>Ghana: Region</p> <p>Burkina Faso: Region</p>		
Year of data	<p>Ghana: 2000; 2008</p> <p>Burkina Faso: 2007</p>		
Year of publication	<p>Ghana: 200?</p> <p>Burkina Faso: 2008</p>		
Methodology	<p>Ghana: Taken from source</p> <p>Burkina Faso: Taken from source</p>		
Copyright	<p>Ghana: R & M DEPT, Electoral Commission, Ghana</p> <p>Burkina Faso: CGD (Centre pour la Gouvernance Démocratique Burkina Faso)</p>		
Present in:	Burkina Faso	x	Ghana
Additional Information			

D_interests*

Indicator name	# different interest groups
Variable(s)	D_interests
Definition	
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	

Present in:	Burkina Faso		Ghana	
Additional Information				

D_disputes*

Indicator name	# conflicts managed			
Variable(s)	D_disputes			
Definition				
Data Source				
Sample size				
Spatial scale				
Year of data				
Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

D_pastoralists

Indicator name	Presence of pastoralists
Variable(s)	D_pastoralists
Definition	Presence of pastoralists, indicated by the average density of cattle in the district (head/ km2)
Data Source	Harvest Choice, available at: http://harvestchoice.org/data/cattle-density-headsq-km-2005 Sourced from: FAO. 2007. Gridded livestock of the world 2007, by G.R.W. Wint and T.P. Robinson. Rome, pp 131.
Sample size	West Africa, East & Central Africa, Southern Africa
Spatial scale	1 km grid cells, recalculated to district level (average value)
Year of data	2005
Year of publication	2011
Methodology	<p>*same procedure as for D_cattle_dens*:</p> <ul style="list-style-type: none"> • Ensure raster is projected correctly - check that it lines up with a correctly projected layer • Run “Zonal statistics as table” (Spatial Analyst Tools\Zonal) • Set District boundaries as input raster or feature zone data • Set “District” as zone field • Set Cattle density layer as input raster or feature data class • Set “Value” as class field • Export table of attributes as a .dbf file – Open in Excel • Extract from data table MEAN values
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Present in:	Burkina Faso	x	Ghana	x
Additional Information				

Support networks

D_information

Indicator name	Access to information (from radio, newspaper, TV)			
Variable(s)	D_information			
Definition	Percentage of women age 15-49 (%) who listen to the radio and/ or read newspaper and/ or watch TV on a weekly basis			
Data Source	MEASURE Demographic and Health Survey (Ghana: 2008; Burkina Faso: 2010) Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro. 2009. <i>Ghana Demographic and Health Survey 2008</i> . Accra, Ghana: GSS, GHS, and ICF Macro; Institut National de la Statistique et de la Démographie (INSD) et ICF International, 2012. <i>Enquête Démographique et de Santé et à Indicateurs Multiples du Burkina Faso 2010</i> . Calverton, Maryland, USA : INSD et ICF International.			
Sample size	Ghana: 4916 women interviewed Burkina Faso: 17087 women interviewed			
Spatial scale	Ghana: Region Burkina Faso: Region			
Year of data	Ghana: 2008 Burkina Faso: 2010			
Year of publication	Ghana: 2009 Burkina Faso: 2012			
Methodology	100 minus the % women with access to NO media (newspaper, radio or tv)			
Copyright	GSS, GHS, INSD and ICF Macro			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_remittances

Indicator name	Receiving remittances		
Variable(s)	D_remittances		
Definition	Proportion (%) of household income from remittances		
Data Source	Ghana: Ghana Statistical Service. 2008. <i>Ghana Living Standards Survey Report of the 5th round (GLSS 5)</i> . GSS, Accra		
Sample size	Ghana: 8687 households		
Spatial scale	Ghana: Region		
Year of data	Ghana: 2005-2006		
Year of publication	Ghana: 2008		
Methodology	Ghana: Data taken directly from source		

Copyright	Ghana: GSS 2008			
Present in:	Burkina Faso		Ghana	x
Additional Information				

Access to land

D_own_land

Indicator name	Farmers owning land			
Variable(s)	D_own_land			
Definition	Proportion of households who have access to land			
Data Source	Burkina Faso: INSD EA-QUIBB 2007. ANALYSE DES RESULTATS DE L'ENQUETE ANNUELLE SUR LES CONDITIONS DE VIE DES MENAGES EN 2007, Tableau 10.7: Pourcentage de ménages possédant certains biens - Charrue/Charrette Available from: http://cns.bf/IMG/pdf/eaquibb_2007.pdf			
Sample size	Burkina Faso: 8500 households			
Spatial scale	Burkina Faso: Region			
Year of data	Burkina Faso: 2007			
Year of publication	Burkina Faso: 2007			
Methodology	Burkina Faso: Taken from source			
Copyright	Burkina Faso: INSD			
Present in:	Burkina Faso	x	Ghana	
Additional Information				

D_avg_plot

Indicator name	Average plot size per household			
Variable(s)	D_avg_plot			
Definition	Average area of land cultivated by each agricultural household			
Data Source	Ghana: CountrySTAT, 2012. <i>Agriculture and access to market by Region: Table 11 Households land tenure (HHAAMR011)</i> , Available from: WFP-CFSVA2009-Agriculture and Access to Markets-By Region, http://countrystat.org/gha/cont/inctables/pageid/wfp/cfsva2009/agriculture_and_access_to_markets/by_region/en , accessed October 2012 Burkina Faso: -			
Sample size	Ghana: 3851 households interviewed			
Spatial scale	Ghana: Region			
Year of data	Ghana: 2008			
Year of publication	Ghana: 2009			
Methodology	Ghana: Data taken from source in acres, and converted to hectares by multiplying by 0.4047.			
Copyright	Ghana: World Food Programme			
Present in:	Burkina Faso		Ghana	x

Additional Information	
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Conflict

D_unemploy

Indicator name	Unemployment rate		
Variable(s)	D_unemploy		
Definition	Rural Rate of unemployment (%)		
Data Source	Ghana: - Burkina Faso: Recensement General de la population et de l'habitation (RGPH) de 2006 – theme_5_caracteristiques_economiques_de_la_population, Tableau 4.3 : Taux de chômage selon les régions (%). Available at: http://cns.bf/IMG/pdf/theme_5_caracteristiques_economiques_de_la_population.pdf		
Sample size	Burkina Faso:		
Spatial scale	Burkina Faso: Region		
Year of data	Burkina Faso: 2006		
Year of publication	Burkina Faso: 2009		
Methodology	Burkina Faso: Taken from source		
Copyright	Burkina Faso: INSD – Recensement General de la population et de l'habitation (RGPH) de 2006		
Present in:	Burkina Faso	x	Ghana
Additional Information			

D_num_eth *

Indicator name	Ethnic diversity		
Variable(s)	D_num_eth		
Definition			
Data Source			
Sample size			
Spatial scale			
Year of data			
Year of publication			
Methodology			
Copyright			
Present in:	Burkina Faso		Ghana
Additional Information			

Gender

D_femHH

Indicator name	Female headed households (%)		
Variable(s)	D_femHH		
Definition	The number of households in each district who acknowledge a single female as the head of the household, as a percentage of all households in each district.		
Data Source	Ghana: GSS, 2012. <i>2010 Population and Housing Census: Summary report of final results</i> , Table 8, p28 Accra. Available at: http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf , accessed October 2012		
Sample size	Ghana: Whole population		
Spatial scale	Ghana: Region		
Year of data	Ghana: 2010		
Year of publication	Ghana: 2012		
Methodology	Ghana: number of female headed households (taken from source) divided by total number of households, multiplied by 100.		
Copyright	Ghana: Ghana Statistical Services 2012		
Present in:	Burkina Faso		Ghana x
Additional Information			

D_g_credit

Indicator name	Gender ratio - credit access		
Variable(s)	D_g_credit		
Definition	Ratio of women:men who borrowed money from a credit union in 2010		
Data Source	Ghana: CUA-Ghana, 2010. <i>Credit Union Association Ghana Data on credit unions for 2010</i> . Available from: http://www.cuagh.com/facts-dates/facts-figures , accessed March 2013 Burkina Faso: -		
Sample size	Ghana: all registered credit unions		
Spatial scale	Ghana: Region		
Year of data	Ghana: 2010		
Year of publication	Ghana: 2010		
Methodology	Ghana: Number of female borrowers divided by number of male borrowers		
Copyright	Ghana: CUA-Ghana, 2010		
Present in:	Burkina Faso		Ghana x
Additional Information			

D_gratio

Indicator name	Gender ratio - population		
Variable(s)	D_gratio		
Definition	Ratio of women to men in the population		
Data Source	Ghana: Population Density Districts (PDD) layer from Frank Annor Burkina Faso: INSD, 2009. <i>RECENSEMENT GENERAL DE LA POPULATION ET DE</i>		

	<p><i>L'HABITATION (RGPH) DE 2006, ANALYSE DES RESULTATS DEFINITIFS, THEME 2 ETAT ET STRUCTURE DE LA POPULATION</i>, Tableau A 3.4 : répartition de la population résidente selon la commune et le sexe. MINISTÈRE DE L'ÉCONOMIE BURKINA FASO ET DES FINANCES Unité – Progrès - Justice, SECRÉTARIAT GÉNÉRAL, INSTITUT NATIONAL DE LA STATISTIQUE ET DE LA DÉMOGRAPHIE, Octobre 2009, Available at: http://cns.bf/IMG/pdf/th_2_etat_et_structure_de_la_population_f.pdf (July 2013)</p>		
Sample size	<p>Ghana: Whole country Burkina Faso: Whole country</p>		
Spatial scale	<p>Ghana: District Burkina Faso: Commune</p>		
Year of data	<p>Ghana: 2000 Burkina Faso: 2006</p>		
Year of publication	<p>Ghana: unknown Burkina Faso: 2009</p>		
Methodology	<p>Ghana: The Population Density Districts (PDD) had different boundaries from the Ghana Volta Districts (GVD). This meant both layers were intersected with each other, the area of each intersected area was calculated. Then the total area of each PDD was calculated.</p> <p>The areas of pieces that had similar GVD district name and PDD district name combinations were summed. Then these areas were converted to percentages of the total PDD area. This percentage was then used to calculate the population in each intersected piece. The population of all pieces with the same GVD name were then summed, giving the total number of people, total males and total females in each GVD district.</p> <p>Then divide the number of females by the number of males.</p> <p>Burkina Faso: Divide number of females by the number of males (totals taken directly from source)</p>		
Copyright	<p>Ghana: GSS Burkina Faso: INSD</p>		
Present in:	Burkina Faso	x	Ghana x
Additional Information			

D_gemployment

Indicator name	Gender ratio - employment
Variable(s)	D_gemployment
Definition	Ratio of women to men who are employed
Data Source	<p>Ghana: GSS, 2008. Economically Active Population (15 to 49 Years) by Indicators, REGION (number) , CountrySTAT Table ID 081SLA010 Sub-national:Labour, Available at: http://countrystat.org/home.aspx?c=GHA&ta=081SLA010&tr=27 , accessed August 2013</p> <p>Burkina Faso: Recensement General de la population et de l'habitation (RGPH) de 2006 – <i>theme_5_caracteristiques_economiques_de_la_population</i>, Tableau 2.22 : Taux d'activité par région de résidence. Available at: http://cns.bf/IMG/pdf/theme_5_caracteristiques_economiques_de_la_population.pdf</p>
Sample size	<p>Ghana: unknown Burkina Faso: Whole population</p>

Spatial scale	Ghana: Region Burkina Faso: Region			
Year of data	Ghana: unknown Burkina Faso: 2006			
Year of publication	Ghana: 2008 Burkina Faso: 2009			
Methodology	Ghana: Taken directly from source Burkina Faso: Rate of active women divided by rate of active men			
Copyright	Ghana: GSS Burkina Faso: INSD			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_fem_ass *

Indicator name	Women's access to assets			
Variable(s)	D_fem_ass			
Definition				
Data Source				
Sample size				
Spatial scale				
Year of data				
Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

Financial capital

“the financial resources that people use to achieve their livelihood objectives” (DFID 1999)

Access to credit

D_avail_MFI

Indicator name	Availability of Microfinance Institutions and access to credit		
Variable(s)	D_avail_MFI		
Definition	<p>Ghana: Density of micro-finance institutions available for individuals to access credit (taken from CUA-Ghana, 2010) - number per 1000 households (taken from 2010 census)</p> <p>Burkina Faso: Proportion of the agricultural population (%) who have access to agricultural credit or microfinance</p>		
Data Source	<p>Ghana: CUA-Ghana, 2010. <i>Credit Union Association of Ghana Data on credit unions for 2010</i>. Available from: http://www.cuagh.com/facts-dates/facts-figures, accessed March 2013; GSS, 2012. <i>2010 Population and Housing Census: Summary report of final results</i>, Accra. Available at: http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf, accessed October 2012</p> <p>Burkina Faso: CountryStat - Recensements et enquêtes agricoles - l'Agriculture Phase Modulaire 2008 - Module socio-économie- Répartition de la population agricole by obtention de crédit agricole ou de microfinance, Available at: http://www.countrystat.org/home.aspx?c=BFA&tr=385</p>		
Sample size	<p>Ghana: all unions</p> <p>Burkina Faso: not given</p>		
Spatial scale	<p>Ghana: Region</p> <p>Burkina Faso: Province</p>		
Year of data	<p>Ghana: 2010</p> <p>Burkina Faso: not given</p>		
Year of publication	<p>Ghana: 2010; 2012</p> <p>Burkina Faso: 2013</p>		
Methodology	<p>Ghana: Number of credit unions divided by number of households multiplied by 1000</p> <p>Burkina Faso: # number of people benefiting from credit divided by sum of the number of people benefiting and not benefiting from credit</p>		
Copyright	<p>Ghana: CUA-Ghana; GSS</p> <p>Burkina Faso: RGA 2008/DPSAA/DGPER</p>		
Present in:	Burkina Faso	x	Ghana x
Additional Information			

Wealth

D_poverty

Indicator name	Poverty level
Variable(s)	D_poverty
Definition	Poverty Headcount Ratio at below '05 PPP \$1.25/Day (percent) (2005), Sub-national poverty headcount ratios derived from 23 nationally representative household surveys and population census information conducted in various years.

	Rates are for the \$1.25/day (extreme poverty) expressed in 2005 international equivalent purchasing power parity (PPP) dollars. Rates are in percentages of total population. (aggregation type: WGHTD)			
Data Source	HarvestChoice, Available at: http://harvestchoice.org/data/poverty-headcount-ratio-below-05-ppp-125day-percent-2005 ; Sourced from: Multiple national household surveys; PovcalNet; The World Bank; and Centro Internacional de Agricultura Tropical (CIAT). 2011			
Sample size	West Africa, East & Central Africa, Southern Africa			
Spatial scale	1 km grid cells, recalculated to district level (average value)			
Year of data	2005			
Year of publication	2011			
Methodology	*same procedure as for D_cattle_dens*: <ul style="list-style-type: none">• Ensure raster is projected correctly - check that it lines up with a correctly projected layer• Run “Zonal statistics as table” (Spatial Analyst Tools\Zonal)• Set District boundaries as input raster or feature zone data• Set “District” as zone field• Set Poverty layer as input raster or feature data class• Set “Value” as class field• Export table of attributes as a .dbf file – Open in Excel• Extract from data table MEAN values			
Copyright	© HarvestChoice, 2006-2013/International Food Policy Research Institute (IFPRI): For personal use and non-commercial purposes: permission is granted to download and copy and to redistribute information and articles – and data subject to the User License – provided that this is not for profit, no text is changed, and the designated copyright notice and source details remain with any material obtained from the site. For material generated by HarvestChoice, the designated copyright notice is © HarvestChoice, 2006-2013. For any reuse or distribution, you must make clear to others the license terms of this work. The best way to do so is with a link to this web page.			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

Human capital

“the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives” (DFID 1999)

Health Status

Statistics providing indicators of the state of health of individuals in each district, which affect their ability to contribute to the labour-force, as well as affecting the time spent caring for them by other members of the household and the expenditure of income within the household.

D_wsaf

Indicator name	Clean water		
Variable(s)	D_wsaf		
Definition	Proportion (%) of households with access to piped, point or improved (protected) sources of water; see country-specific definitions for details. Burkina Faso: Rate of coverage of modern water points per province (according to the objective of having one water point serving 300 people)		
Data Source	Ghana: CountrySTAT, 2012. <i>Housing facilities and assets by Region: Table 8 Households main source of drinking water (HHFAR008)</i> , Available from: WFP-CFSVA2009-Housing, Facilities and Assets-By Region, http://countrystat.org/gha/cont/inctables/pageid/wfp/cfsva2009/housing_facilities_and_assets/by_region/en , accessed October 2012 Burkina Faso: ONAPAD Partie 9 Donnees eau potable et assainissement.pdf Table EN 3.1 p301 'ONAPAD - Les indicateurs de la pauvreté et du développement humain durable en chiffres – Edition 2005'		
Sample size	Ghana: 3851 households Burkina Faso: unknown		
Spatial scale	Ghana: Region Burkina Faso: Province		
Year of data	Ghana: 2008 Burkina Faso: 2004		
Year of publication	Ghana: 2009 Burkina Faso: 2005		
Methodology	Ghana: the summed proportions (%) of households with access to piped water, water from a borehole/ tube well and water from a protected dug well. Burkina Faso: data taken directly from source		
Copyright	Ghana: World Food Programme Burkina Faso: ONAPAD, DGIRH		
Present in:	Burkina Faso	x	Ghana x
Additional Information			

D_food_sec *

Indicator name	Food security
Variable(s)	D_food_sec
Definition	
Data Source	
Sample size	
Spatial scale	
Year of data	

Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

D_malnut

Indicator name	Rate of malnutrition			
Variable(s)	D_malnut			
Definition	<p>The proportion (%) of children under 5 years old who are underweight or severely malnourished.</p> <p>Ghana: Proportion (%) of children below -2SD of WHO Child Growth Standards median for height-for-age</p> <p>Burkina Faso: % <i>émacié</i>, % of children with insufficient weight with respect to height</p>			
Data Source	<p>Ghana: Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro. 2009. <i>Ghana Demographic and Health Survey 2008</i>. Accra, Ghana: GSS, GHS, and ICF Macro. Available at: http://www.measuredhs.com/pubs/pdf/FR221/FR221%5B13Aug2012%5D.pdf, accessed October 2012</p> <p>Burkina Faso: INSD, 2012. <i>Santé – Liste des tableaux, Tableau 06.09: Indicateurs nutritionnels par région en 2003, 2005 et 2007</i>, Available from: Données Statistiques - Statistiques démographiques et sociales – Santé, http://www.insd.bf/fr/, accessed October 2012 – NB : now also hosted on new website http://cns.bf/</p>			
Sample size	<p>Ghana: 12 360 households</p> <p>Burkina Faso: unknown</p>			
Spatial scale	<p>Ghana: Region</p> <p>Burkina Faso: Region</p>			
Year of data	<p>Ghana: 2008</p> <p>Burkina Faso: 2007</p>			
Year of publication	<p>Ghana: 2009</p> <p>Burkina Faso: 2008</p>			
Methodology	<p>Ghana: Data taken directly from source.</p> <p>Burkina Faso: Data taken directly from source.</p>			
Copyright	<p>Ghana: GSS, GHS and ICF Macro 2009</p> <p>Burkina Faso: INSD 2012</p>			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_clinics

Indicator name	# clinics per 1000 households
Variable(s)	D_clinics
Definition	<p>Total number of clinics present in each district per 1000 households.</p> <p>Ghana: number of Health Centres and Clinics (owned by CHAG, Islam, Government, Private and Quasi-government) and CHPs per 1000 households</p>

	Burkina Faso: number of CSPSs (Centre de Santé et de Promotion Sociale) present in each district per 1000 households.		
Data Source	Ghana: MOH, 2010. <i>Health Sector in Ghana: Facts and Figures 2010</i> , available at: http://www.moh-ghana.org/UploadFiles/Publications/GHS%20Facts%20and%20Figures%202010_22APR2012.pdf , accessed October 2012 Burkina Faso: INSD, 2012. <i>Santé – Liste des tableaux, Tableau 06.19: Infrastructures sanitaires par région en 2008</i> , Available from: Données Statistiques - Statistiques démographiques et sociales – Santé, http://www.insd.bf/fr/ , accessed October 2012 – NB : now hosted on new website http://cns.bf/		
Sample size	Ghana: unclear Burkina Faso: unclear		
Spatial scale	Ghana: Region Burkina Faso: Region		
Year of data	Ghana: 2009 Burkina Faso: 2003		
Year of publication	Ghana: 2010 Burkina Faso: 2004		
Methodology	Ghana: sum of all Health Centres and Clinics (in all categories of ownership) and CHPSs, divided by total number of households per region, multiplied by 1000 Burkina Faso: Number of CSPSs per province (taken from source) divided by the total number of household per province and multiplied by 1000		
Copyright	Ghana: MOH Burkina Faso: INSD, EDS		
Present in:	Burkina Faso	x	Ghana
Additional Information			

Labour availability

D_work_pop

Indicator name	Working age population
Variable(s)	D_work_pop
Definition	Proportion (%) of total population aged between 15 and 64 Ghana: total labour force aged 15-49
Data Source	Ghana: CountryStat Ghana, 2008. <i>Economically active population (15-49 years)</i> . Table ID 081SLA010, www.countrystat.org accessed March 2013; GSS, 2012. <i>2010 Population and Housing Census: Summary report of final results</i> , Accra. Available at: http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf , accessed October 2012 Burkina Faso: Recensement General de la population et de l'habitation (RGPH) de 2006 – Theme 2: Etat et Structure de la population, Tableau 4.1 : Structure de la population par milieu de résidence et par région selon les groupes d'âges classiques, Available at: http://cns.bf/IMG/pdf/th_2_etat_et_structure_de_la_population_f.pdf
Sample size	Ghana: Whole population Burkina Faso: Whole population
Spatial scale	Ghana: Region Burkina Faso: Province

Year of data	Ghana: 2008 (working pop); 2010 (total pop) Burkina Faso: 2006			
Year of publication	Ghana: 2008 (working pop); 2012 (total pop) Burkina Faso: 2007			
Methodology	Ghana: total labour force aged 15-49 (taken from CountryStat, 2008) divided by total population (taken from 2010 census) multiplied by 100 Burkina Faso: Taken directly from source			
Copyright	Ghana: GSS Burkina Faso: INSD			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_g_ratio

Indicator name	Gender ratio
Variable(s)	D_g_ratio
Definition	Ratio of women to men in the population
Data Source	Ghana: Population Density Districts (PDD) layer from Frank Annor Burkina Faso: INSD, 2009. <i>RECENSEMENT GENERAL DE LA POPULATION ET DE L'HABITATION (RGPH) DE 2006, ANALYSE DES RESULTATS DEFINITIFS, THEME 2 ETAT ET STRUCTURE DE LA POPULATION</i> , Tableau A 3.4 : répartition de la population résidente selon la commune et le sexe. MINISTÈRE DE L'ÉCONOMIE BURKINA FASO ET DES FINANCES Unité – Progrès - Justice, SECRÉTARIAT GÉNÉRAL, INSTITUT NATIONAL DE LA STATISTIQUE ET DE LA DÉMOGRAPHIE, Octobre 2009, Available at: http://cns.bf/IMG/pdf/th_2_etat_et_structure_de_la_population_f.pdf (July 2013)
Sample size	Ghana: Whole country Burkina Faso: Whole country
Spatial scale	Ghana: District Burkina Faso: Commune
Year of data	Ghana: 2000 Burkina Faso: 2006
Year of publication	Ghana: unknown Burkina Faso: 2009
Methodology	Ghana: The Population Density Districts (PDD) had different boundaries from the Ghana Volta Districts (GVD). This meant both layers were intersected with each other, the area of each intersected area was calculated. Then the total area of each PDD was calculated. The areas of pieces that had similar GVD district name and PDD district name combinations were summed. Then these areas were converted to percentages of the total PDD area. This percentage was then used to calculate the population in each intersected piece. The population of all pieces with the same GVD name were then summed, giving the total number of people, total males and total females in each GVD district. Then divide the number of females by the number of males. Burkina Faso: Divide number of females by the number of males (totals taken directly from source)
Copyright	Ghana: GSS Burkina Faso: INSD

Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_HIV

Indicator name	HIV prevalence			
Variable(s)	D_HIV			
Definition	Ghana: represented by the incidence of TB, The number of reported cases of TB (all types) per 100 000 population. Burkina Faso: Proportion (%) of the population sampled who were tested and are HIV positive.			
Data Source	Ghana: MOH, 2010. <i>Health Sector in Ghana: Facts and Figures 2010</i> , available at: http://www.moh-ghana.org/UploadFiles/Publications/GHS%20Facts%20and%20Figures%202010_22APR2012.pdf , accessed October 2012. Burkina Faso: INSD, 2013. Tableau 08.08 : Prévalence du VIH/Sida par sexe et par région en 2003 (en %), in <i>Annuaire Statistiques 2011, Edition 2013</i> , Available from: http://cns.bf/IMG/pdf/annuaire_finale2011.pdf , accessed July 2013			
Sample size	Ghana: Burkina Faso: unknown			
Spatial scale	Ghana: Region Burkina Faso: Region			
Year of data	Ghana: 2009 Burkina Faso: 2003			
Year of publication	Ghana: 2010 Burkina Faso: 2013			
Methodology	Ghana: Data taken directly from source Burkina Faso: Data taken directly from source			
Copyright	Ghana: Ministry of Health, Ghana Burkina Faso: INSD, Enquête démographique et de santé			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_migration*

Indicator name	Rate of migration			
Variable(s)	D_migration			
Definition				
Data Source				
Sample size				
Spatial scale				
Year of data				
Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional				

Information	
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Skills (education and experience)

D_literacy

Indicator name	Literacy rate		
Variable(s)	D_literacy		
Definition	According to UNESCO's definition of 'functional literacy': 'A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development' (cited in UNESCO 2005, p30). A simpler version of this is 'the ability to read and write, with understanding, a short, simple sentence about one's everyday life' (cited in UNESCO 2005, p29)		
Data Source	Ghana: GSS, 2012. 2010 <i>Population and Housing Census: Summary report of final results</i> , Accra. Available at: http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf , accessed October 2012 Burkina Faso: INSD, 2012. QUIBB 2007, Table 5.02: <i>Éducation – Liste des tableaux, Tableau 05.02 : Taux d'alphabétisation des individus de 15 ans et plus par région en 2003, 2005 et 2007</i> , Available from: Données Statistiques - Statistiques démographiques et sociales – Éducation, http://www.insd.bf/fr/ , accessed October 2012 – NB : now hosted on new website http://cns.bf/		
Sample size	Ghana: Whole population Burkina Faso: 8500 households		
Spatial scale	Ghana: Region Burkina Faso: Region		
Year of data	Ghana: 2010 Burkina Faso: 2007		
Year of publication	Ghana: 2012 Burkina Faso: 2007		
Methodology	Ghana: data in actual numbers of literate population taken directly from source, converted to percentage literate by dividing total number of literate population by total population (both from the source table). Burkina Faso: Data taken directly from source		
Copyright	Ghana: GSS Burkina Faso: INSD		
Present in:	Burkina Faso	x	Ghana x
Additional Information			

D_ag_ext *

Indicator name	Agricultural extension		
Variable(s)	D_ag_ext		
Definition			
Data Source			
Sample size			
Spatial scale			
Year of data			

Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

D_soil_mgmnt *

Indicator name	Soil management used			
Variable(s)	D_soil_mgmnt			
Definition				
Data Source				
Sample size				
Spatial scale				
Year of data				
Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

D_employment

Indicator name	Employment rate			
Variable(s)	D_employment			
Definition	The proportion of the working age population (%) who are employed			
Data Source	<p>Ghana: GSS, 2008. Economically Active Population (15 to 49 Years) by Indicators, REGION (number) , CountrySTAT Table ID 081SLA010 Sub-national:Labour, Available at: http://countrystat.org/home.aspx?c=GHA&ta=081SLA010&tr=27 , accessed August 2013</p> <p>Burkina Faso: Recensement General de la population et de l'habitation (RGPH) de 2006 – <i>theme_5_caracteristiques_economiques_de_la_population</i>, Tableau 2.22 : Taux d'activité par région de résidence. Available at: http://cns.bf/IMG/pdf/theme_5_caracteristiques_economiques_de_la_population.pdf</p>			
Sample size	<p>Ghana: unknown</p> <p>Burkina Faso: Whole population</p>			
Spatial scale	<p>Ghana: Region</p> <p>Burkina Faso: Region</p>			
Year of data	<p>Ghana: unknown</p> <p>Burkina Faso: 2006</p>			
Year of publication	<p>Ghana: 2008</p> <p>Burkina Faso: 2009</p>			
Methodology	<p>Ghana: Taken directly from source</p> <p>Burkina Faso: Taken directly from source</p>			
Copyright	Ghana: GSS			

	Burkina Faso: INSD			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

Physical capital

“the basic infrastructure and producer goods needed to support livelihoods” (DFID 1999)

Infrastructure

D_prox_rd

Indicator name	Proximity to road network			
Variable(s)	D_prox_rd			
Definition	Proportion of district area (%) lying within 5 km of a road			
Data Source	CPWF Phase 1 data collection - road networks			
Sample size	n/a			
Spatial scale	Volta basin, Limpopo Basin			
Year of data				
Year of publication				
Methodology	Ensure layer is projected correctly Remove non-perennial and ephemeral rivers Create 5km buffer around remaining rivers Calculate area within buffer, divide by total district area, multiply by 100			
Copyright	CPWF 2008-2011			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_equipment

Indicator name	Having agricultural equipment			
Variable(s)	D_equipment			
Definition	Proportion of households (%) who possess agricultural equipment (BF: plough; Gh: hoe)			
Data Source	Ghana: CountrySTAT, 2012. <i>Housing, Facilities and Assets by Region: Table 11 Households assets (HHFAR011)</i> , Available from: WFP-CFSVA2009-Housing, Facilities and Assets-By Region, http://countrystat.org/home.aspx?c=GHA&ta=HHFAR011&tr=171 , accessed July 2013 Burkina Faso: INSD EA-QUIBB 2007. ANALYSE DES RESULTATS DE L'ENQUETE ANNUELLE SUR LES CONDITIONS DE VIE DES MENAGES EN 2007, Tableau 10.7: Pourcentage de ménages possédant certains biens - Charrue/Charrette Available from: http://cns.bf/IMG/pdf/eaquibb_2007.pdf			
Sample size	Ghana: 3851 households Burkina Faso: 8500 households			
Spatial scale	Ghana: Region Burkina Faso: Region			
Year of data	Ghana: 2008 Burkina Faso: 2007			
Year of publication	Ghana: 2009 Burkina Faso: 2007			
Methodology	Ghana: Taken from source			

	Burkina Faso: Taken from source			
Copyright	Ghana: World Food Programme Burkina Faso: INSO			
Present in:	Burkina Faso	x	Ghana	x
Additional Information	Ghana: Burkina Faso:			

D_postharv_infr *

Indicator name	Postharvest infrastructure available			
Variable(s)	D_postharv_infr			
Definition				
Data Source				
Sample size				
Spatial scale				
Year of data				
Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

Market access

D_prox_rd

Indicator name	Proximity to road network			
Variable(s)	D_prox_rd			
Definition	Proportion of district area (%) lying within 5 km of a road			
Data Source	CPWF Phase 1 data collection - road networks			
Sample size	n/a			
Spatial scale	Volta basin, Limpopo Basin			
Year of data				
Year of publication				
Methodology	Ensure layer is projected correctly Remove non-perennial and ephemeral rivers Create 5km buffer around remaining rivers Calculate area within buffer, divide by total district area, multiply by 100			
Copyright	CPWF 2008-2011			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_market

Indicator name	Distance from the nearest market			
Variable(s)	D_market			
Definition	Median travel time to human settlement of 20,000 or greater population. (aggregation type: AVG)			
Data Source	HarvestChoice, available from: http://harvestchoice.org/data/average-travel-time-nearest-town-over-20k-hours-2000 Sourced from: HarvestChoice/IFPRI 2009			
Sample size	West Africa, East & Central Africa, Southern Africa			
Spatial scale	1 km grid cells, recalculated to district level (average value)			
Year of data	2000			
Year of publication	2011			
Methodology	<p>*same procedure as for D_cattle_dens*:</p> <ul style="list-style-type: none"> • Ensure raster is projected correctly - check that it lines up with a correctly projected layer • Run “Zonal statistics as table” (Spatial Analyst Tools\Zonal) • Set District boundaries as input raster or feature zone data • Set “District” as zone field • Set Market access layer as input raster or feature data class • Set “Value” as class field • Export table of attributes as a .dbf file – Open in Excel • Extract from data table MEAN values 			
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Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_transport

Indicator name	Having transportation			
Variable(s)	D_transport			
Definition	<p>Ghana: Proportion of households possessing a bicycle (%)</p> <p>Burkina Faso: Proportion of households (%) living at most 30 minutes away from public transport</p>			
Data Source	<p>Ghana: CountrySTAT, 2012. <i>Housing, Facilities and Assets by Region: Table 11 Households assets (HHFAR011)</i>, Available from: WFP-CFSVA2009-Housing, Facilities and Assets-By Region, http://countrystat.org/home.aspx?c=GHA&ta=HHFAR011&tr=171 , accessed July 2013</p> <p>Burkina Faso: INSD EA-QUIBB 2007. ANALYSE DES RESULTATS DE L'ENQUETE</p>			

	ANNUELLE SUR LES CONDITIONS DE VIE DES MENAGES EN 2007, Tableau 8.7: Répartition (en %) des ménages selon le temps (en minutes) nécessaire pour atteindre les transports publics les plus proches, Available from: http://cns.bf/IMG/pdf/eaquibb_2007.pdf			
Sample size	Ghana: 3851 households Burkina Faso: 8500 households			
Spatial scale	Ghana: Region Burkina Faso: Region			
Year of data	Ghana: 2008 Burkina Faso: 2007			
Year of publication	Ghana: 2009 Burkina Faso: 2007			
Methodology	Ghana: Taken from source Burkina Faso: Sum of % of households living 0-14 and 15-29 min from public transport			
Copyright	Ghana: World Food Programme Burkina Faso: INSD			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_cell_net

Indicator name	Having cellphone (for market information)			
Variable(s)	D_cell_net			
Definition	Proportion of households (%) possessing a mobile telephone			
Data Source	Ghana: Ghana Statistics Services, 2010. <i>Census 2010 Summary of results:</i> Telecommunications indicators. Available from: http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf , accessed June 2013 Burkina Faso: INSD EA-QUIBB 2007. ANALYSE DES RESULTATS DE L'ENQUETE ANNUELLE SUR LES CONDITIONS DE VIE DES MENAGES EN 2007, Tableau 10.1: Pourcentage de ménages possédant certains biens d'équipement ménagers, Available from: http://cns.bf/IMG/pdf/eaquibb_2007.pdf , Accessed June 2013			
Sample size	Ghana: Whole population Burkina Faso: 8500 households			
Spatial scale	Ghana: Region Burkina Faso: Region			
Year of data	Ghana: 2010 Burkina Faso: 2007			
Year of publication	Ghana: 2010 Burkina Faso: 2007			
Methodology	Ghana: Total number of households possessing mobile telephone divided by total number of households Burkina Faso: Taken directly from source			
Copyright	Ghana: GSS Burkina Faso: INSD – QUIBB 2007			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

D_input_market

Indicator name	Input markets present			
Variable(s)	D_input_market			
Definition	Ghana: Density of agro-dealers per 1000 farmers			
Data Source	Ghana: Krausova, M. and A.B. Banful. 2010. <i>Overview of the agricultural input sector in Ghana</i> . IFPRI Discussion Paper 01024, Development Strategy and Governance Division, IFPRI. Available at: http://www.ifpri.org/publication/overview-agricultural-input-sector-ghana , accessed September 2013 Burkina Faso:			
Sample size	Ghana: 2893 input dealers interviewed Burkina Faso:			
Spatial scale	Ghana: Region Burkina Faso:			
Year of data	Ghana: 2009 Burkina Faso:			
Year of publication	Ghana: 2010 Burkina Faso:			
Methodology	Ghana: Data taken directly from source - read from graph in Figure 1. Burkina Faso:			
Copyright	Ghana: Copyright 2010 International Food Policy Research Institute Burkina Faso:			
Present in:	Burkina Faso		Ghana	x
Additional Information				

D_output_market

Indicator name	Output markets present			
Variable(s)	D_output_market			
Definition	Density of populated places (villages, towns, cities) per district			
Data Source	de Condappa, D, I. Terrasson and J. Lemoalle. 2008. [CD] <i>BFP VOLTA Data Volume</i> , IRD & CGIAR-CPWF - Populated_places.shp from BFP VOLTA Data Volume Disc Originally from: FAO Geonetwork. <i>Populated places in the world</i> . Available from: http://www.fao.org/geonetwork/srv/en/metadata.show?id=12690 ,			
Sample size	Global			
Spatial scale	District			
Year of data	2003			
Year of publication	2008			
Methodology	In ArcGIS, using Burkina Faso departements and Ghana districts polygon layers, use Hawth's Tools - Analysis tools - Count points in polygon -> gives the number of populated places per district Calculate the number of populated places divided by district area			
Copyright	CPWF/ FAO Copyright: Exclusive right to the publication, production, or sale of the rights to a literary, dramatic, musical, or artistic work, or to the use of a commercial print or label, granted by law for a specified period of time to an author, composer, artist, distributor			

Present in:	Burkina Faso	x	Ghana	x
Additional Information	<p>The geonames were extracted in 2003 from the National Geospatial-Intelligence Agency's (NGA) and the U.S. Board on Geographic Names' (US BGN) database of foreign geographic feature names through the GEOnet Names Server (GNS).</p> <p>The layer contains information on cities, towns, villages, or other agglomerations of buildings where people live and work. For the bigger areas a name is enclosed.</p> <p>Please note: All related fields are described in the attached DCW.pdf document.</p>			

Natural resources

“the natural resource stocks from which resource flows and services (e.g. nutrient cycling, erosion protection) useful for livelihoods are derived”

Soil suitability

Characteristics of soil that describe its suitability for a technology.

D_SOC

Indicator name	Soil organic matter content		
Variable(s)	D_SOC		
Definition	<p>Soil organic carbon (g/kg) in topsoil (0-5cm deep) - % area of district with high or very high soil organic carbon on the scale: 0-1 g/kg = low; 1-2 g/kg = medium; 2-5 g/kg = high; above 5 g/kg = very high Ghana: area of district with >5 g/kg SOC (very high - mostly 5-15 g/kg, but includes two regions which additionally have up to 2% of area with >15 g/kg SOC) Burkina Faso: area of district with 5-15 g/kg SOC (very high)</p>		
Data Source	<p>Published by AFSIS http://www.isric.org/data/soil-property-maps-africa-1-km - Reference ISRIC – World Soil Information, 2013. Africa soil property maps at 1 km. Available for download at www.isric.org.</p>		
Sample size	Africa		
Spatial scale	<p>1km resolution raster of Africa, clipped to Volta basin, tabulated to district NB: Ghana tabulated to Region</p>		
Year of data	1950 - 2005 (temporal coverage approximate)		
Year of publication	2013		
Methodology	<ul style="list-style-type: none"> • Ensure layer is projected correctly • Reclassify (Spatial Analyst tools\Reclass\reclassify) raster according to decision that organic content is measures in terms of g/kg – 0 -1, 1-2, 2-5, 5-15 and 15+, according to Henry et al., 2009 – Soil carbon ion ecoregions of Africa. Biogeosciences discuss. Vol. 6, Pgs 797 – 823 • Tabulate by district area (Spatial Analyst Tools\Zonal\Tabulate by area) • Divide results by 1000000 		
Copyright	© Copyright ISRIC 2013		
Present in:	Burkina Faso	x	Ghana
			x
Additional Information	<p>Downloaded: 5th June 2013 Data license (IP policy): Attribution-ShareAlike CC BY-SA Online repository of R scripts: https://code.google.com/p/gsif/source/browse/trunk/AFRICA/1km/</p>		

D_clay

Indicator name	Clay content		
Variable(s)	D_clay		
Definition	% area of district with on average >30% clay in top 200cm of soil		
Data Source	<p>Published by AFSIS http://www.isric.org/data/soil-property-maps-africa-1-km - Reference ISRIC – World Soil Information, 2013. Africa soil property maps at 1 km. Available for download at www.isric.org.</p>		
Sample size	Africa		

Spatial scale	1km resolution raster of Africa, clipped to Volta basin, tabulated to district NB: Ghana tabulated to Region		
Year of data	1950 - 2005 (temporal coverage approximate)		
Year of publication	2013		
Methodology	<ul style="list-style-type: none"> • Ensure layer is projected correctly • Reclassify (Spatial Analyst tools\Reclass\reclassify) raster according to decision that Clay: < 20%, 20 – 30%, > 30% in accordance with Soil textural triangle http://age-web.age.uiuc.edu/classes/age357/ABE459_08/html/Soil%20Properties.pdf. • Tabulate by district area (Spatial Analyst Tools\Zonal\Tabulate by area) • Divide results by 1000000 		
Copyright	© Copyright ISRIC 2013		
Present in:	Burkina Faso	x	Ghana x
Additional Information	Downloaded: 5 th June 2013 Data license (IP policy): Attribution-ShareAlike CC BY-SA Online repository of R scripts: https://code.google.com/p/gsif/source/browse/trunk/AFRICA/1km/		

D_perc_lixi

Indicator name	Lixisols dominant		
Variable(s)	D_perc_lixi		
Definition	Percentage district area that has lixisol as soil type		
Data Source	Ghana: Soil data file from Frank Annor		
Sample size	Ghana: Ghana		
Spatial scale	Ghana: District		
Year of data	Ghana: unknown		
Year of publication	Ghana: unknown		
Methodology	Ghana: The calculation: The soil layer was intersected with the district file. The area of each intersection was calculated. This area was summed per district and this was then converted into a percentage of the total area of the district.		
Copyright	Ghana: unknown		
Present in:	Burkina Faso		Ghana x
Additional Information			

Land availability

D_cropland

Indicator name	Total cropland area		
Variable(s)	D_cropland; Cropland (for Fields to display)		
Definition	Total cropland area (including irrigated) (ha) (2000). (aggregation type: SUM)		
Data Source	HarvestChoice, available at: http://harvestchoice.org/data/cropland-area-ha Sourced from: Ramankutty et al. (2008), "Farming the planet: 1. Geographic distribution of global		

	agricultural lands in the year 2000", Global Biogeochemical Cycles, Vol. 22, GB1003, doi:10.1029/2007GB002952.		
Sample size	West Africa, East & Central Africa, Southern Africa		
Spatial scale	1 km grid cells, recalculated to district level (average value)		
Year of data	2000		
Year of publication	2008		
Methodology	*same procedure as for D_cattle_dens*: <ul style="list-style-type: none"> • Ensure raster is projected correctly - check that it lines up with a correctly projected layer • Run "Zonal statistics as table" (Spatial Analyst Tools\Zonal) • Set District boundaries as input raster or feature zone data • Set "District" as zone field • Set Cropland layer as input raster or feature data class • Set "Value" as class field • Export table of attributes as a .dbf file – Open in Excel • Extract from data table MEAN values 		
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Present in:	Burkina Faso	x	Ghana
Additional Information			

D_slope *

Indicator name	Average slope		
Variable(s)	D_slope		
Definition			
Data Source			
Sample size			
Spatial scale			
Year of data			
Year of publication			
Methodology			
Copyright			
Present in:	Burkina Faso		Ghana
Additional Information			

D_pop_dens

Indicator name	Population density
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Variable(s)	D_pop_dens		
Definition	Average population density (people/km ²)		
Data Source	Ghana: GSS, 2012. 2010 <i>Population and Housing Census: Summary report of final results</i> , Accra. Available at: http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf , accessed October 2012 Burkina Faso: INSD, 2012. <i>Population – Liste des tableaux, Tableau 03.16: Population et densité par région et province des trois derniers recensements généraux de la population et de l'habitation</i> , Available from: Données Statistiques - Statistiques démographiques et sociales – Population, http://www.insd.bf/fr/ , accessed October 2012. – NB : now hosted on new website http://cns.bf/		
Sample size	Ghana: Whole country Burkina Faso: Whole country		
Spatial scale	Ghana: Region Burkina Faso: Province		
Year of data	Ghana: 2010 Burkina Faso: 2006		
Year of publication	Ghana: 2010 Burkina Faso: 2012		
Methodology	Ghana: Taken directly from source Burkina Faso: Taken directly from source		
Copyright	Ghana: GSS Burkina Faso: INSD		
Present in:	Burkina Faso	x	Ghana
Additional Information			

D_urbanisation*

Indicator name	Urbanisation		
Variable(s)	D_urbanisation		
Definition			
Data Source			
Sample size			
Spatial scale			
Year of data			
Year of publication			
Methodology			
Copyright			
Present in:	Burkina Faso		Ghana
Additional Information			

Biomass availability

The total amount of biomass available to farmers to use in agriculture (e.g. for mulch or feed).

D_bio_prod

Indicator name	Potential Biomass production																																																						
Variable(s)	D_bio_prod																																																						
Definition	Index of biomass production that is not crops, based on landcover types, with value range: 0 - 3 (100% city/cropland/bare - 100% forest)																																																						
Data Source	"Global Land Cover 2000 database. European Commission, Joint Research Centre, 2003, http://bioval.jrc.ec.europa.eu/products/glc2000/products.php																																																						
Sample size	All of Africa																																																						
Spatial scale	1 km resolution, calculated to % of district area																																																						
Year of data	1994 - 2000																																																						
Year of publication	2003																																																						
Methodology	<p>Calculate area of each landcover class in each district, then % of total area covered by each class. To create index, assign landcover classes to categories: Forest, shrubland, grassland, other (includes cropland, cities, water); and rank categories according to the amount of biomass produced and available by farmers to use as mulch or feed: Forest = 3, shrubland = 2, grassland = 1, other = 0</p> <table><thead><tr><th>Landcover class</th><th>Category</th><th>Rank</th></tr></thead><tbody><tr><td>Closed evergreen lowland forest</td><td>Forest</td><td>3</td></tr><tr><td>Mangrove</td><td>Other</td><td>0</td></tr><tr><td>Mosaic Forest / Croplands</td><td>Forest/other</td><td>1.5</td></tr><tr><td>Mosaic Forest / Savanna</td><td>Forest/grassland</td><td>2</td></tr><tr><td>Deciduous woodland</td><td>Forest</td><td>3</td></tr><tr><td>Deciduous shrubland with sparse trees</td><td>Shrubland</td><td>2</td></tr><tr><td>Closed grassland</td><td>Grassland</td><td>1</td></tr><tr><td>Open grassland with sparse shrubs</td><td>Grassland</td><td>1</td></tr><tr><td>Open grassland</td><td>Grassland</td><td>1</td></tr><tr><td>Sparse grassland</td><td>Grassland</td><td>1</td></tr><tr><td>Swamp bushland and grassland</td><td>Grassland</td><td>1</td></tr><tr><td>Croplands (>50%)</td><td>Other</td><td>0</td></tr><tr><td>Croplands with open woody vegetation</td><td>Other</td><td>0.5</td></tr><tr><td>Irrigated croplands</td><td>Other</td><td>0</td></tr><tr><td>Bare rock</td><td>Other</td><td>0</td></tr><tr><td>Waterbodies</td><td>Other</td><td>0</td></tr><tr><td>Cities</td><td>Other</td><td>0</td></tr></tbody></table>	Landcover class	Category	Rank	Closed evergreen lowland forest	Forest	3	Mangrove	Other	0	Mosaic Forest / Croplands	Forest/other	1.5	Mosaic Forest / Savanna	Forest/grassland	2	Deciduous woodland	Forest	3	Deciduous shrubland with sparse trees	Shrubland	2	Closed grassland	Grassland	1	Open grassland with sparse shrubs	Grassland	1	Open grassland	Grassland	1	Sparse grassland	Grassland	1	Swamp bushland and grassland	Grassland	1	Croplands (>50%)	Other	0	Croplands with open woody vegetation	Other	0.5	Irrigated croplands	Other	0	Bare rock	Other	0	Waterbodies	Other	0	Cities	Other	0
Landcover class	Category	Rank																																																					
Closed evergreen lowland forest	Forest	3																																																					
Mangrove	Other	0																																																					
Mosaic Forest / Croplands	Forest/other	1.5																																																					
Mosaic Forest / Savanna	Forest/grassland	2																																																					
Deciduous woodland	Forest	3																																																					
Deciduous shrubland with sparse trees	Shrubland	2																																																					
Closed grassland	Grassland	1																																																					
Open grassland with sparse shrubs	Grassland	1																																																					
Open grassland	Grassland	1																																																					
Sparse grassland	Grassland	1																																																					
Swamp bushland and grassland	Grassland	1																																																					
Croplands (>50%)	Other	0																																																					
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Bare rock	Other	0																																																					
Waterbodies	Other	0																																																					
Cities	Other	0																																																					
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	http://www.gem.jrc.it/glc2000 ". Copied from http://bioval.jrc.ec.europa.eu/products/glc2000/disclaimer.php			
Present in:	Burkina Faso	x	Ghana	x
Additional Information	http://bioval.jrc.ec.europa.eu/products/glc2000/metadata.php?product=Africa DATASET DESCRIPTION Title of Dataset Vegetation Map of Africa The Land Cover map of Africa is one regional component of the GLC2000 exercise, conceived and coordinated by the European Commission's Joint Research Centre. The GLC2000 maps are based on daily observations made from 1st November 1999 to 31st Abstract December 2000 by the VEGETATION sensor on the SPOT 4 satellite. The Africa map's legend pays special attention to the forest and savannah biomes. The map shows specific land-cover features as the irrigated agriculture, the ribbons of secondary forest of the swamp forests at a spatial detail never achieved before. Keywords Global Land Cover 2000, Africa, Vegetation Language English Version / Edition 3.0 Production Date 20/02/2003 Status Complete CONTACT DETAILS Compiled by Institution Name : GVM, JRC Contact Name : Philippe MAYAUX Email : philippe.mayaux@jrc.it Web Link : http://bioval.jrc.ec.europa.eu/products/glc2000/glc2000.php Project Co-ordination Institution : Joint Research Centre Contact Name : Philippe MAYAUX Email : philippe.mayaux@jrc.it Web Link : http://www-gvm.jrc.it/glc2000/defaultGLC2000.htm Other Collaborating Partners E. Bartholom��, M. Massart, C. Van Cutsem, A. Cabral, A. Nonguierma, O. Diallo, C. Pretorius, M. Thompson, M. Cherlet, J-F. Pekel, P. Defourny, M. Vasconcelos, A. Di Gregorio, S.Fritz, G. De Grandi, C..Elvidge, P.Vogt, A. Belward			

	<p>METHODOLOGY</p> <p>Lineage of the Data</p> <p>Data Source(s)</p> <p>Temporal Start : 1994-1996 for radar data</p> <p>Coverage of the Data End : 2000 for optical data</p> <p>Name : Land-cover legend</p> <p>Description :</p> <p>Legend Online Resources : http://www-gvm.jrc.it/glc2000/Products/africa/GLC2000_africa3.pdf</p> <p>Data Qualitative :</p> <p>Quality % Assessed by ongoing</p> <p>Assessment Regional Experts :</p> <p>SPATIAL REPRESENTATION INFORMATION</p> <p>Geographical Location ULX : -28.837057 LRX : 57.921857 ULY : 46.002137 LRY : -36.024635</p> <p>Spatial Resolution 1km at Equator (0.00892857dd)</p> <p>Map Projection Geographic (Lat/Lon)</p> <p>Spheroid WGS84</p> <p>File Size (Mb) 3.40 / 3.43</p>
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D_cattle_dens

Indicator name	Cattle density
Variable(s)	D_cattle_dens
Definition	Average cattle density per district (head/ km ²), from Cattle density per grid cell (in 2005). (aggregation type: WGHTD)
Data Source	Harvest Choice, available at: http://harvestchoice.org/data/cattle-density-headsq-km-2005 Sourced from: FAO. 2007. Gridded livestock of the world 2007, by G.R.W. Wint and T.P. Robinson. Rome, pp 131.
Sample size	West Africa, East & Central Africa, Southern Africa
Spatial scale	1 km grid cells, recalculated to district level (average value)
Year of data	2005
Year of publication	2011
Methodology	<ul style="list-style-type: none"> • Ensure raster is projected correctly - check that it lines up with a correctly projected layer • Run "Zonal statistics as table" (Spatial Analyst Tools\Zonal)

	<ul style="list-style-type: none"> • Set District boundaries as input raster or feature zone data • Set “District” as zone field • Set Cattle density layer as input raster or feature data class • Set “Value” as class field • Export table of attributes as a .dbf file – Open in Excel • Extract from data table MEAN values 			
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Present in:	Burkina Faso	x	Ghana	x
Additional Information				

Weather variability

D_dryspell

Indicator name	Incidence of dryspells
Variable(s)	D_MARcv
Definition	Longterm annual rainfall coefficient of variation (percent) (1901-2005). (aggregation type: AVG) - maximum value per district used
Data Source	Harvest Choice, available at: http://harvestchoice.org/data/longterm-average-annual-rainfall-cv-percent (Accessed June 2013) Sourced from: University of East Anglia Climatic Research Unit (CRU). [Phil Jones, Ian Harris]. CRU Time Series (TS) high resolution gridded datasets. NCAS British Atmospheric Data Centre. Available from http://badc.nerc.ac.uk/data/cru (Accessed on 1 May 2011).
Sample size	West Africa, East & Central Africa, Southern Africa
Spatial scale	1 km grid cells, recalculated to district level (average value)
Year of data	1901 - 2005
Year of publication	2011
Methodology	*same procedure as for D_cattle_dens*: <ul style="list-style-type: none"> • Ensure raster is projected correctly - check that it lines up with a correctly projected layer • Run “Zonal statistics as table” (Spatial Analyst Tools\Zonal) • Set All Districts_Hydro as input raster or feature zone data • Set “District” as zone field • Set MAR layer as input raster or feature data class • Set “Value” as class field • Export table of attributes as a .dbf file – Open in Excel • Extract from data table MINIMUM and MEAN values
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Present in:	Burkina Faso	x	Ghana	x
Additional Information				

Pests and disease

D_loss_prod *

Indicator name	Loss of harvest to pests/disease			
Variable(s)	D_loss_prod			
Definition				
Data Source				
Sample size				
Spatial scale				
Year of data				
Year of publication				
Methodology				
Copyright				
Present in:	Burkina Faso		Ghana	
Additional Information				

Fields to display

Total population

Indicator name	Total population			
Variable(s)	population			
Definition	Total population per district (Ghana: 2000; Burkina Faso: 2006)			
Data Source	Ghana: Population Density Districts (PDD) layer from Frank Annor Burkina Faso: INSD, 2009. <i>RECENSEMENT GENERAL DE LA POPULATION ET DE L'HABITATION (RGPH) DE 2006, ANALYSE DES RESULTATS DEFINITIFS, THEME 2 ETAT ET STRUCTURE DE LA POPULATION</i> , Tableau A 3.4 : répartition de la population résidente selon la commune et le sexe. MINISTÈRE DE L'ÉCONOMIE BURKINA FASO ET DES FINANCES Unité – Progrès - Justice, SECRÉTARIAT GÉNÉRAL, INSD, Octobre 2009, Available at: http://cns.bf/IMG/pdf/th_2_etat_et_structure_de_la_population_f.pdf (July 2013)			
Sample size	Ghana: Whole country Burkina Faso: Whole country			
Spatial scale	Ghana: District Burkina Faso: Commune			
Year of data	Ghana: 2000 Burkina Faso: 2006			
Year of publication	Ghana: unknown Burkina Faso: 2009			
Methodology	Ghana: The Population Density Districts (PDD) had different boundaries from the Ghana Volta Districts (GVD). This meant both layers were intersected with each other, the area of each intersected area was calculated. Then the total area of each PDD was calculated. The areas of pieces that had similar GVD district name and PDD district name combinations were summed. Then these areas were converted to percentages of the total PDD area. This percentage was then used to calculate the population in each intersected piece. The population of all pieces with the same GVD name were then summed, giving the total number of people in each GVD district. Burkina Faso: Taken directly from source			
Copyright	Ghana: GSS Burkina Faso: INSD			
Present in:	Burkina Faso	x	Ghana	x
Additional Information				

Mean annual rainfall (mm)

See D_MAR

Total cropland area (ha)

See D_cropland

Poverty level (%)

See D_poverty

Food security (%)

See D_malnut

Glossary of variables for each country:-

Ghana

D_MARavg	Longterm average annual rainfall (mm) (1901-2005). (aggregation type: AVG) - average MAR per district
D_MARmin	Longterm average annual rainfall (mm) (1901-2005). (aggregation type: AVG) - average MAR per district
D_prox_riv	% of district area lying within 1 km of a perennial river
D_watertable	Estimated depth to groundwater (mbgl - metres below ground level)
D_surfwater	Density of reservoirs per district
D_water_infr	
D_wpermit	
D_salinity	
D_numCBOs	The number of community-based organisations (CBOs), non-profit organisations and/or religious organisations present in the district, per 1000 population. Represented by: D_avail_MFI – number of credit unions in the district per 1000, which represent a portion of all community organisations
D_voting	Proportion of the voting population (%) who voted in the last government elections (Ghana: 2000; Burkina Faso: May 2007)
D_interests	
D_disputes	
D_pastoralists	Presence of pastoralists, indicated by the average density of cattle in the district (head/ km ²)
D_information	Percentage of women age 15-49 (%) who listen to the radio and/ or read newspaper and/ or watch TV on a weekly basis
D_remittances	Proportion (%) of household income from remittances
D_own_land	
D_avg_plot	Average area of land cultivated by each agricultural household
D_unemploy	
D_eth_num	
D_femHH	The number of households in each district who acknowledge a single female as the head of the household, as a percentage of all households in each district.
D_g_credit	Ratio of women:men who borrowed money from a credit union in 2010
D_gratio	Ratio of women to men in the population
D_gemployment	Ratio of women to men who are employed
D_fem_assets	
D_poverty	Poverty Headcount Ratio at below '05 PPP \$1.25/Day (percent) (2005)
D_avail_MFI	Density of micro-finance institutions available for individuals to access credit - number per 1000 households Ghana: Number of credit unions (taken from CUA-Ghana, 2010) divided by number of households (taken from 2010 census) multiplied by 1000
D_wsafe	Proportion (%) of households with access to piped, point or improved (protected) sources of water; see country-specific definitions for details.
D_food_sec	
D_malnut	The proportion (%) of children under 5 years old who are underweight or severely malnourished. Ghana: Proportion (%) of children below -2SD of WHO Child Growth Standards median for height-for-age

D_clinics	Total number of clinics present in each district per 1000 households. Ghana: number of Health Centres and Clinics (owned by CHAG, Islam, Government, Private and Quasi-government) and CHPs per 1000 households
D_work_pop	Working age population - proportion (%) of total population aged between 15 and 64 Ghana: total labour force aged 15-49
D_g_ratio	Ratio of women to men in the population
D_HIV	Proportion (%) of the population sampled who were tested and are HIV positive. Ghana: represented by the rate of TB - The number of reported cases of TB (all types) per 100 000 population
D_migration	
D_literacy	Literacy rate - the proportion of population (%) aged 15+ who can read and write
D_ag_ext	
D_soil_mgmnt	
D_employment	The proportion of the working age population (%) who are employed
D_prox_rd	Proportion of district area (%) lying within 5 km of a road
D_equipment	Proportion of households (%) who possess agricultural equipment (BF: plough; Gh: hoe)
D_postharv_infr	
D_transport	Ghana: Proportion of households possessing a bicycle (%)
D_market	Median travel time to human settlement of 20,000 or greater population. (aggregation type: AVG)
D_cell_net	Proportion of households (%) possessing a mobile telephone
D_input_market	Density of agro-dealers per 1000 farmers
D_output_market	Density of populated places (villages, towns, cities) per district
D_SOC	Soil organic carbon (g/kg) in topsoil (0-5cm deep) - % area of district with high or very high soil organic carbon on the scale: 0-1 g/kg = low; 1-2 g/kg = medium; 2-5 g/kg = high; above 5 g/kg = very high Ghana: area of district with >5 g/kg SOC (very high - mostly 5-15 g/kg, but includes two regions which additionally have up to 2% of area with >15 g/kg SOC)
D_clay	% area of district with on average >30% clay in top 200cm of soil
D_perc_lixi	Percentage of district area that has lixisol as soil type
D_cropland	Total cropland area (including irrigated) (ha) (2000). (aggregation type: SUM)
D_slope	
D_pop_dens	Average population density (people/km ²)
D_urbanisation	
D_bio_prod	Index of biomass production that is not crops, based on landcover types, with value range: 0 - 3 (100% city/cropland/bare - 100% forest)
D_cattle_dens	Average cattle density per district (head/ km ²), from Cattle density per grid cell (in 2005). (aggregation type: WGHTD)
D_dryspell	Longterm annual rainfall coefficient of variation (percent) (1901-2005). (aggregation type: AVG) - maximum value per district used
D_loss_prod	

Burkina Faso

D_MARavg	Longterm average annual rainfall (mm) (1901-2005). (aggregation type: AVG) - average MAR per district
D_MARmin	Longterm average annual rainfall (mm) (1901-2005). (aggregation type: AVG) - average MAR per district
D_prox_riv	% of district area lying within 1 km of a perennial river
D_watertable	Estimated depth to groundwater (mbgl - metres below ground level)
D_surfwater	Density of reservoirs per district
D_water_infr	
D_wpermit	
D_salinity	
D_numCBOs	Proportion of households (%) whose head of household belongs to an association or organisation
D_voting	Proportion of the voting population (%) who voted in the last government elections (Ghana: 2000; Burkina Faso: May 2007)
D_interests	
D_disputes	
D_pastoralists	Presence of pastoralists, indicated by the average density of cattle in the district (head/ km2)
D_information	Percentage of women age 15-49 (%) who listen to the radio and/ or read newspaper and/ or watch TV on a weekly basis
D_remittances	
D_own_land	Proportion of households who have access to land
D_avg_plot	Average area of land cultivated by each agricultural household
D_unemploy	Rural Rate of unemployment (%)
D_eth_num	
D_femHH	
D_g_credit	
D_gratio	Ratio of women to men in the population
D_gemployment	Ratio of women to men who are employed
D_fem_assets	
D_poverty	Poverty Headcount Ratio at below '05 PPP \$1.25/Day (percent) (2005)
D_avail_MFI	Proportion of the agricultural population (%) who have access to agricultural credit or microfinance
D_wsafe	Proportion (%) of households with access to piped, point or improved (protected) sources of water; see country-specific definitions for details. Burkina Faso: Rate of coverage of modern water points per province (according to the objective of having one water point serving 300 people)
D_food_sec	
D_malnut	The proportion (%) of children under 5 years old who are underweight or severely malnourished. Burkina Faso: % <i>émacié</i> , % of children with insufficient weight with respect to height
D_clinics	Total number of clinics present in each district per 1000 households. Burkina Faso: number of CSPSs (Centre de Santé et de Promotion Sociale) present in each district per 1000 households.
D_work_pop	Working age population - proportion (%) of total population aged between 15 and 64

D_g_ratio	Ratio of women to men in the population
D_HIV	Proportion (%) of the population sampled who were tested and are HIV positive.
D_migration	
D_literacy	Literacy rate - the proportion of population (%) aged 15+ who can read and write
D_ag_ext	
D_soil_mgmnt	
D_employment	The proportion of the working age population (%) who are employed
D_prox_rd	Proportion of district area (%) lying within 5 km of a road
D_equipment	Proportion of households (%) who possess agricultural equipment (BF: plough; Gh: hoe)
D_postharv_infr	
D_transport	Burkina Faso: Proportion of households (%) living at most 30 minutes away from public transport
D_market	Median travel time to human settlement of 20,000 or greater population. (aggregation type: AVG)
D_cell_net	Proportion of households (%) possessing a mobile telephone
D_input_market	
D_output_market	Density of populated places (villages, towns, cities) per district
D_SOC	Soil organic carbon (g/kg) in topsoil (0-5cm deep) - % area of district with high or very high soil organic carbon on the scale: 0-1 g/kg = low; 1-2 g/kg = medium; 2-5 g/kg = high; above 5 g/kg = very high Burkina Faso: area of district with 5-15 g/kg SOC (very high)
D_clay	% area of district with on average >30% clay in top 200cm of soil
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D_cropland	Total cropland area (including irrigated) (ha) (2000). (aggregation type: SUM)
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D_pop_dens	Average population density (people/km ²)
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D_cattle_dens	Average cattle density per district (head/ km ²), from Cattle density per grid cell (in 2005). (aggregation type: WGHTD)
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