

Metadata for the Limpopo Basin - Zimbabwe

Contents

List of abbreviations.....	4
Spatial definition of study/focus area.....	5
Note on data processing.....	6
Water resources.....	7
Water availability	7
D_MAR	7
Access to water	8
D_prox_riv.....	8
D_watertable	8
D_surf_water	9
D_water_infr *	10
D_wpermit*	10
Water quality	11
D_salinity*.....	11
Social capital	12
Organisational capacity.....	12
D_numCBOs	12
D_voting *	12
D_interests*	12
D_disputes*	13
Support networks	13
D_information.....	13
D_remittances*	14
Access to land	14
D_own_land.....	14
D_avg_plot.....	14

Conflict	15
D_unemploy.....	15
Gender	15
D_femHH.....	15
D_g_credit *	15
D_gratio.....	16
D_gemployment	16
D_fem_ass *	16
Financial capital.....	18
Access to credit	18
D_avail_MFI	18
Wealth.....	18
D_poverty.....	18
Human capital	19
Health Status.....	19
D_wsaf.....	19
D_food_sec	19
D_clinics*	20
Labour availability	20
D_work_pop.....	20
D_g_ratio.....	20
D_HIV	21
Skills (education and experience)	21
D_literacy	21
D_ag_ext *	22
D_soil_mgmnt *	22
D_employment	22
Physical capital.....	24
Infrastructure	24
D_prox_rd	24
D_equipment	24
D_postharv_infr *	24
Market access	25
D_prox_rd	25

D_market	25
D_transport *	26
D_cell_net *	26
D_input_market *	26
D_output_market	27
Natural resources.....	28
Soil suitability	28
D_SOC	28
D_clay.....	28
Land availability	29
D_cropland.....	29
D_slope	30
D_pop_dens	30
Biomass availability.....	31
D_bio_prod	31
D_cattle_dens	33
Weather variability	34
D_dryspells.....	34
Pests and disease	35
D_loss_prod *	35
Fields to display.....	36
Total population.....	36
Mean annual rainfall (mm)	36
Total cropland area (ha).....	36
Poverty level (%)	36
Food security (%)	36
Glossary of variables for Zimbabwe:-	37

List of abbreviations

AFSIS	Africa Soil Information Service
ALCOM	Aquatic Resource Management for Local Community Development Programme
AVG	Average
BFP	Basin Focal Project
BGS	British Geological Survey
CBO	Community Based Organisation
CGIAR	Consultative Group on International Agricultural Research
CPWF	CGIAR Challenge Program on Water and Food
CSO	Central Statistics Office
DAFF	Department of Agriculture, Forestry and Fisheries
DFID	Department for International Development (UK)
DHI	Drought Hazard Index
DWAF-SA	Department of Water Affairs and Forestry, South Africa
EISA	Electoral Institute for Sustainable Democracy in Africa
FAO	Food and Agricultural Organisation of the United Nations
FNC	Food and Nutrition Council
GIS	Geographical Information Systems
HIV	Human Immunodeficiency Virus
IEC	Independent Electoral Commission
IFPRI	International Food Policy Research Institute
INE	Instituto Nacional de Estatística (National Institute of Statistics, Mozambique)
IP	Intellectual Property
IRD	International Relief and Development
ISRIC	International Soil Reference and Information Centre
JRC	Joint Research Centre
LimRAK	Limpopo River Awareness Kit
MAR	Mean Annual Rainfall
MFI	Micro-Finance Institution
MISAU	Ministerio da Saude - Ministry of Health Mozambique
NGO	Non-Governmental Organisation
NPO	Non-Profit Organisation
SACCO	Savings and Credit Cooperative Societies
SADC	The Southern African Development Community
SIRDC	Scientific and Industrial Research and Development Centre
SNV	SNV Netherlands Development Organisation
SOC	Soil Organic Carbon
StatsSA	Statistics South Africa
SWB	Surface Water Body
TAGMI	Targeting AGwater Management Interventions
TB	Tuberculosis
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USGS	United States Geological Services
WGHTD	Weighted
WRD	The original SADC Water Resource Database produced by ALCOM
ZAMFI	Zimbabwe Association of Microfinance Institutions
ZIMSTAT	Zimbabwe National Statistics Agency
ZimVAC	Zimbabwe Vulnerability Assessment Committee
ZNSA	Zimbabwe National Statistics Agency

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 Limpopo River Basin according to GIS overlay of the river basin over district boundaries.

Botswana (quasi-Provinces)	Mozambique	South Africa (new boundaries set in 2005)	Zimbabwe
<i>Urban districts:</i> Gaborone Francistown Lobatse Selibe Phikwe	<i>Gaza Province:</i> Bilene-Macia Chibuto Chicualacuala Chigubo Chokwe Guija Mabalane Manjacaze Massangena Massingir Xai-Xai Xai-Xai(town)	<i>Limpopo Province:</i> Capricorn Greater Sekhukhune Mopani Vhembe Waterberg	<i>Matabeleland South Province:</i> Beitbridge Bulilimamangwe Gwanda Insiza Matobo Umzingwane
<i>Rural Districts:</i> Southern South East Kweneng Kgatleng Central North East	<i>Inhambane Province:</i> Funhalouro Mabote Massinga Panda	<i>Mpumalanga Province:</i> Nkangala Ehlanzeni Gert Sibande	<i>Matabeleland North Province:</i> Bubi Umguza
		<i>North West Province:</i> Bojanala Central (now Ngaka Modiri Molema)	<i>Masvingo Province:</i> Chiredzi Mwenezi
		<i>Gauteng:</i> Mestwedding Sedibeng West Rand Ekurhuleni City of Johannesburg City of Tshwane	<i>Midlands Province:</i> Mberengwa

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 and Food Security.
 - 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 **Conservation Agriculture**, rainfall range classes were set for the whole basin, not according to the range of values within each country (based on Rusinamhodzi et al 2011, who show that conservation agriculture performs very well within the **Med** rainfall class as below, averagely with **High** rainfall, and poorly with **Low** rainfall):
 - i. **Low** rainfall: < 350mm average per district
 - ii. **Med** rainfall: 350mm - 700mm average per district
 - iii. **High** rainfall: >700mm average per district
 - c. Mean Annual Rainfall: for **Small scale irrigation** and **Small Reservoirs**, the data was treated as for All indicators
 - d. Food Security: this data was compiled by Magombeyi et al (2013) to be comparable between countries, and therefore it has been similarly categorised in the tool:
 - i. **Low** food security: < $\pm 80\%$
 - ii. **Med** food security: $\pm 80 - 90\%$
 - iii. **High** food security: > $\pm 90\%$

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 such as distances 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	<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 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 <p>**Note: for Conservation Agriculture, rainfall range classes were set for the whole basin, not according to the range of values within each country: Low rainfall: < 350mm average per district Med rainfall: 350mm - 700mm average per district High rainfall: >700mm average per district (based on Rusinamhodzi et al 2011)</p>
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.
Additional Information	

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 Remove non-perennial and ephemeral rivers Create 1km buffer around remaining rivers Calculate area within buffer, divide by total district area, multiply by 100
Copyright	CPWF 2008-2011
Additional Information	

D_watertable

Indicator name	Depth of 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
Additional Information	Terms of use: Following extensive review, the British Geological Survey (BGS), a component

	<p>institute of the Natural Environment Research Council (NERC), asserts ownership of all intellectual property and associated legal rights in the following mapping "the Mapping":</p> <ul style="list-style-type: none"> ▪ Groundwater Storage Map of Africa ▪ Map of Depth To Groundwater Across Africa ▪ Groundwater Productivity Map of Africa; <p>The Mapping is made available to download and to be viewed for any purpose. Extracts of materials derived from the Mapping may be reproduced in analogue or secure electronic format (e.g. appropriately secured .PDF format from which it is not possible to: (i) reverse-engineer back to, or to decompile, the Data; and/or (ii) print or download the reproduced extracts independently from the document), for any purpose.</p> <p>The following acknowledgement must accompany material derived from the Mapping:</p> <p>"Based upon mapping provided by British Geological Survey © NERC 2012. All rights reserved".</p> <p>No part of any of the Mapping may be traded, sold, licensed or sub-licensed or in any other way supplied/made available on a commercial basis to any other person or organisation.</p> <p>Neither NERC nor its employees gives any warranty as to the quality or accuracy of the Mapping, or its suitability for any use. All implied conditions relating to the quality or suitability of the Mapping, and all liabilities arising from the supply of the Mapping (including any liability arising in negligence) and for any reliance on results arising out of use of Mapping, are excluded to the fullest extent permitted by law.</p> <p>BGS has made reasonable attempts to identify/confirm ownership of any data used in connection with the creation of the Mapping, but will take down the Mapping immediately where infringement of any third party rights in any such data used in the creation of the Mapping is brought to our attention.</p> <p>By downloading or using any part of the Mapping, you agree that you have read, understood and accept these terms of use.</p> <p>Any queries, please contact Alan MacDonald</p>
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D_surf_water

Indicator name	Surface water nearby
Variable(s)	D_surf_water
Definition	Number of surface water bodies per km ² per district
Data Source	<p>African Water Resource Database - SADC-WRD Surface Water Body (sadc_swb dataset)</p> <p>Downloaded from: FAO Geonetwork, http://www.fao.org/geonetwork/srv/en/main.home , accessed September 2013</p>
Sample size	18098 polygons, lakes, dams and reservoirs features derived based on 1:250 000 data originally from ALCOM
Spatial scale	Southern Africa
Year of data	1997?
Year of publication	2006
Methodology	In ArcGIS intersect sadc_swb with Limpopo countries district boundaries

	Export attribute table to Excel and extract the number of Surface Water Bodies per district Calculate the density of Surface Water Bodies per area of the district
Copyright	FAO
Additional Information	Enhanced derivative based on the original SADC-WRD database of lakes & impoundments, the SADC_SWB shapefile data layer is comprised of 18098 polygons, lakes, dams and reservoirs features derived based on 1:250 000 data originally from ALCOM. Acronyms and Abbreviations: SADC - The Southern African Development Community; WRD - The original SADC Water Resource Database produced by ALCOM; ALCOM - Aquatic Resource Management for Local Community Development Programme; SWB - Surface Water Body.

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	
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	
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	
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	Number of major NGOs active in the district per 1000 population
Data Source	Love, D., Taigbenu, A.E. and Jonker, L. 2005. An overview of the Mzingwane Catchment, Zimbabwe, a contribution to the WaterNet Challenge Program Project 17 “Integrated Water Resource management for Improved Rural Livelihoods: Managing risk, mitigating drought and improving water productivity in the water scarce Limpopo Basin”. WaterNet Working Paper 1. WaterNet, Harare. Available at: http://www.waternetonline.ihe.nl/workingpapers/WP1%20Mzingwane.pdf , accessed September 2013
Sample size	
Spatial scale	District
Year of data	2005
Year of publication	2005
Methodology	Number of NGOs working in each district extracted from Table 2; number divided by the total population per district and multiplied by 1000
Copyright	Waternet
Additional Information	

D_voting *

Indicator name	Voting turnout
Variable(s)	D_voting
Definition	
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
Additional Information	

D_interests*

Indicator name	# different interest groups
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Variable(s)	D_interests
Definition	
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
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	
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, 2010-11
Data Source	Zimbabwe National Statistics Agency (ZIMSTAT) and ICF International. 2012. <i>Zimbabwe Demographic and Health Survey 2010-11</i> . Calverton, Maryland: ZIMSTAT and ICF International Inc.
Sample size	10 828 households sampled nation-wide
Spatial scale	Province
Year of data	2010-11
Year of publication	2012
Methodology	100 minus the % women with access to NO media (newspaper, radio or tv)
Copyright	ZNSA, ICF International
Additional Information	

D_remittances*

Indicator name	Receiving remittances
Variable(s)	D_remittances
Definition	
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
Additional Information	

Access to land

D_own_land

Indicator name	Farmers owning land
Variable(s)	D_own_land
Definition	Proportion of households who own agricultural land
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
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 (ha)
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
Additional Information	

Conflict

D_unemploy

Indicator name	Unemployment rate
Variable(s)	D_unemploy
Definition	(Usual) Rate of unemployment (%) in 2011
Data Source	ZimStat. 2012. <i>2011 Labour Force Survey</i> . Zimbabwe National Statistics Agency: Harare Available at: http://www.zimstat.co.zw/dmdocuments/Laborforce.pdf , Accessed December 2012
Sample size	9 359 households nationally
Spatial scale	Province
Year of data	2011
Year of publication	2012
Methodology	Data taken directly from source
Copyright	ZimStat 2012
Additional Information	Note: these figures seem unrealistically low, but it is assumed that they still represent the correct relative situation between provinces

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	ZimStat. 2004. <i>National profile – 2002 Population Census</i> , Central Statistics Office, Zimbabwe: Harare
Sample size	Census population
Spatial scale	District
Year of data	2002
Year of publication	2004
Methodology	Data taken directly from source
Copyright	Zimbabwe Statistics Agency 2004
Additional Information	

D_g_credit *

Indicator name	Gender ratio - credit access
Variable(s)	D_g_credit
Definition	
Data Source	
Sample size	
Spatial scale	

Year of data	
Year of publication	
Methodology	
Copyright	
Additional Information	

D_ratio

Indicator name	Gender ratio - population
Variable(s)	D_ratio
Definition	Ratio of women to men in the population
Data Source	ZimStat. 2004. <i>National profile – 2002 Population Census</i> , Central Statistics Office, Zimbabwe: Harare
Sample size	Census population
Spatial scale	District
Year of data	2002
Year of publication	2004
Methodology	Data taken directly from source
Copyright	Zimbabwe Statistics Agency 2004
Additional Information	

D_employment

Indicator name	Gender ratio - employment
Variable(s)	D_employment
Definition	Ratio of women to men who are employed
Data Source	ZimStat. 2012. <i>2011 Labour Force Survey</i> . Zimbabwe National Statistics Agency: Harare Available at: http://www.zimstat.co.zw/dmdocuments/Laborforce.pdf , Accessed December 2012
Sample size	9 359 households nationally
Spatial scale	Province
Year of data	2011
Year of publication	2012
Methodology	Calculated number of women employed divided by the number of men employed
Copyright	ZimStat 2012
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	
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 MFIs
Variable(s)	D_avail_MFI
Definition	Number of functional Savings and Credit Cooperative Societies (SACCOs) available per 1000 pop
Data Source	Klinkhamer, M. 2009. <i>Microfinance Sector Recovery Study</i> , Consultation Report for SNV & ZAMFI, by AYANI Inclusive Financial Sector Consultants, Available at: http://www.snvworld.org/sites/www.snvworld.org/files/publications/microfinance_sector_recover_study_-_zimbabwe.pdf , accessed September 2013
Sample size	Zimbabwe
Spatial scale	Province
Year of data	2006
Year of publication	2009
Methodology	Divide the number of <i>functional</i> SACCOs per province by the total population of province (2004, ZIMDAT) and multiply by 1000.
Copyright	SNV, ZAMFI
Additional Information	

Wealth

D_poverty

Indicator name	Poverty level
Variable(s)	D_poverty
Definition	Rural poverty level (%) (2011)
Data Source	Magombeyi, M. S., Taigbenu, A. E. and Barron, J., 2013. <i>Rural poverty and Food insecurity mapping at district level for improved agricultural water management in the Limpopo River Basin</i> . Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food (CPWF). 54pp. (CPWF Research for Development (R4D) Series 6)
Sample size	
Spatial scale	District
Year of data	2011
Year of publication	2013
Methodology	Data taken directly from source.
Copyright	Copyright c 2013, CGIAR Challenge Program on Water and Food
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. Zimbabwe: Proportion (%) of households with access to an improved source of drinking water (household water connection, public standpipe, borehole, protected dug well, protected spring, rainwater collection and bottled water – if a secondary source is also improved)
Data Source	CSO. 2012. <i>ZimDAT Database</i> , [application] Available for download from http://www.zimstat.co.zw/ , accessed August 2012
Sample size	Not known
Spatial scale	District
Year of data	2003
Year of publication	2011
Methodology	Data taken directly from source
Copyright	Central Statistics Office, Zimbabwe
Additional Information	

D_food_sec

Indicator name	Food security
Variable(s)	D_food_sec
Definition	Proportion of households (%) that are food secure (2011)
Data Source	Magombeyi, M. S., Taigbenu, A. E. and Barron, J., 2013. <i>Rural poverty and Food insecurity mapping at district level for improved agricultural water management in the Limpopo River Basin</i> . Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food (CPWF). 54pp. (CPWF Research for Development (R4D) Series 6)
Sample size	
Spatial scale	District
Year of data	2011
Year of publication	2013
Methodology	Inverse of the source data (% food <i>insecure</i> households) - 100 minus source data. **Note: this data was compiled by Magombeyi et al (2013) to be comparable between countries, and therefore it has been similarly categorised in the tool (unlike most of the data which is categorised so that there are almost equal numbers of districts in each category):

	Low food security: < \pm 80% Med food security: \pm 80 - 90% High food security: > \pm 90%
Copyright	Copyright c 2013, CGIAR Challenge Program on Water and Food
Additional Information	

D_clinics*

Indicator name	# clinics per 1000 households
Variable(s)	D_clinics
Definition	
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
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 Zimbabwe: Proportion (%) of total population aged 15 and above
Data Source	ZimStat. 2012. <i>2011 Labour Force Survey</i> . Zimbabwe National Statistics Agency: Harare Available at: http://www.zimstat.co.zw/dmdocuments/Laborforce.pdf , Accessed December 2012
Sample size	9 359 households nationally
Spatial scale	Province
Year of data	2011
Year of publication	2012
Methodology	Calculated total economically active and economically inactive population (Table 4.6) divided by the total population (Table 2.1) multiplied by 100
Copyright	ZimStat 2012
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	ZimStat. 2004. <i>National profile – 2002 Population Census</i> , Central Statistics Office, Zimbabwe: Harare
Sample size	Census population
Spatial scale	District
Year of data	2002
Year of publication	2004
Methodology	Data taken directly from source
Copyright	Zimbabwe Statistics Agency 2004
Additional Information	

D_HIV

Indicator name	HIV prevalence
Variable(s)	D_HIV
Definition	Proportion (%) of the population sampled who were tested and are HIV positive.
Data Source	Central Statistical Office (CSO) [Zimbabwe] and Macro International Inc. 2007. <i>Zimbabwe Demographic and Health Survey 2005-06</i> . Calverton, Maryland: CSO and Macro International Inc. Available at: http://www.zimstat.co.zw/index.php?option=com_content&view=article&id=65&Itemid=64 , accessed August 2012
Sample size	10 800 households, interviewed household members aged 15-49
Spatial scale	Province
Year of data	2005
Year of publication	2007
Methodology	Data taken directly from source
Copyright	CSO [Zimbabwe] and Macro International Inc. 2007
Additional Information	

Skills (education and experience)

D_literacy

Indicator name	Literacy rate
Variable(s)	D_literacy
Definition	<p>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)</p> <p>Zimbabwe: the proportion (%) of women and men (aged 15+) who have completed secondary schooling or higher, or can read a whole sentence, or can read a part of a sentence</p>
Data Source	Central Statistical Office (CSO) [Zimbabwe] and Macro International Inc. 2007.

	<i>Zimbabwe Demographic and Health Survey 2005-06</i> . Calverton, Maryland: CSO and Macro International Inc. Available at: http://www.zimstat.co.zw/index.php?option=com_content&view=article&id=65&Itemid=64 , accessed August 2012
Sample size	10 800 households, interviewed household members aged 15-49
Spatial scale	Province
Year of data	2005
Year of publication	2007
Methodology	Data taken directly from source
Copyright	CSO [Zimbabwe] and Macro International Inc. 2007
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	
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	
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	ZimStat. 2012. <i>2011 Labour Force Survey</i> . Zimbabwe National Statistics Agency: Harare Available at: http://www.zimstat.co.zw/dmdocuments/Laborforce.pdf , Accessed December 2012
Sample size	9 359 households nationally
Spatial scale	Province
Year of data	2011
Year of publication	2012
Methodology	Calculated total economically active employed population divided by the total economically active and economically inactive population (Table 4.6) multiplied by 100
Copyright	ZimStat 2012
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 Create 5km buffer around roads Calculate area within buffer, divide by total district area, multiply by 100
Copyright	CPWF 2008-2011
Additional Information	

D_equipment

Indicator name	Having agricultural equipment
Variable(s)	D_equipment
Definition	Proportion of households (%) who possess agricultural equipment Zimbabwe: one or more draught animals
Data Source	ZimVAC. 2012. <i>Rural Livelihoods Assessment</i> . May 2012 Report, ZimVAC and the Food and Nutrition Council: Harare
Sample size	
Spatial scale	Province
Year of data	2012
Year of publication	2012
Methodology	Data taken directly from source
Copyright	ZimVAC – FNC - SIRDC
Additional Information	

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	
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 Create 5km buffer around roads Calculate area within buffer, divide by total district area, multiply by 100
Copyright	CPWF 2008-2011
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	*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 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

	<ul style="list-style-type: none"> Extract from data table MEAN values
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Additional Information	

D_transport *

Indicator name	Having transportation
Variable(s)	D_transport
Definition	
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
Additional Information	

D_cell_net *

Indicator name	Having cellphone (for market information)
Variable(s)	D_cell_net
Definition	
Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
Additional Information	

D_input_market *

Indicator name	Input markets present
Variable(s)	D_input_market
Definition	

Data Source	
Sample size	
Spatial scale	
Year of data	
Year of publication	
Methodology	
Copyright	
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 Zimbabwe 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
Additional Information	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). 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. Please note: All related fields are described in the attached DCW.pdf document.

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	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 Zimbabwe: area of district with 5-15 g/kg SOC (very high)
Data Source	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 .
Sample size	Africa
Spatial scale	1km resolution raster of Africa, clipped to Limpopo basin, tabulated to district
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
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_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	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 .
Sample size	Africa
Spatial scale	1km resolution raster of Africa, clipped to Limpopo basin, tabulated to district
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
Additional Information	<p>Downloaded: 5th June 2013</p> <p>Data license (IP policy): Attribution-ShareAlike CC BY-SA</p> <p>Online repository of R scripts: https://code.google.com/p/gsif/source/browse/trunk/AFRICA/1km/</p>

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	<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 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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	with a link to this web page.
Additional Information	

D_slope

Indicator name	Average surface slope
Variable(s)	D_slope
Definition	Proportion (%) of the district by area that is classed as flat (i.e. with < 8% slope, or a gradient <4.57°, according to FAO's Geonetwork slope classification - http://www.fao.org/geonetwork/srv/en/main.home#soils)
Data Source	Surface slope courtesy of the U.S. Geological Survey – according to http://www.usgs.gov/visual-id/credit_usgs.html ; Available for download from: USGS - https://lta.cr.usgs.gov/HYDRO1K , downloaded May 2013
Sample size	Global
Spatial scale	Calculated to district
Year of data	Various
Year of publication	1996
Methodology	(See Extended Methodology and GTOPO30 README found at https://lta.cr.usgs.gov/gtopo30 for greater detail) <ul style="list-style-type: none"> • Download the .tar file for the Limpopo tile • Convert into a raster using IMAGEGRID • Define the co-ordinate system and projection to match the other data layers • Note that the documentation comments that the raster values have been multiplied by 100 in order to allow for the inclusion of the maximum amount of data., therefore modify raster by two orders of magnitude to correct for this • Re-classify raster according to FAO's Geonetwork classification of slope classes (http://www.fao.org/geonetwork/srv/en/main.home#soils): <ol style="list-style-type: none"> a. Level to undulating - < 8% slope (< 4.57°) b. Rolling to hilly – 8 – 30% slope (4.57° - 16.7°) c. Steeply bisected to mountainous - > 30% slope) (> 16.7°). • Calculate area per class per district • Calculate % area per class of total district area
Copyright	USGS 2012
Additional Information	

D_pop_dens

Indicator name	Population density
Variable(s)	D_pop_dens
Definition	Average population density (people/km ²)
Data Source	ZimStat. 2004. <i>National profile – 2002 Population Census</i> , Central Statistics Office, Zimbabwe: Harare
Sample size	Census population
Spatial scale	District
Year of data	2002
Year of publication	2004

Methodology	Total population divided by surface area
Copyright	Zimbabwe Statistics Agency 2004
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	JRC. 2003. <i>Global Land Cover 2000 database</i> . European Commission, Joint Research Centre, [website] Available at: http://bioval.jrc.ec.europa.eu/products/glc2000/products.php , accessed July 2013																																													
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>Degraded evergreen lowland forest</td><td>Forest</td><td>3</td></tr><tr><td>Closed deciduous forest</td><td>Forest</td><td>3</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>Open deciduous shrubland</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>Croplands (>50%)</td><td>Other</td><td>0</td></tr><tr><td>Salt hardpans</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	Degraded evergreen lowland forest	Forest	3	Closed deciduous forest	Forest	3	Deciduous woodland	Forest	3	Deciduous shrubland with sparse trees	Shrubland	2	Open deciduous shrubland	Shrubland	2	Closed grassland	Grassland	1	Open grassland with sparse shrubs	Grassland	1	Open grassland	Grassland	1	Sparse grassland	Grassland	1	Croplands (>50%)	Other	0	Salt hardpans	Other	0	Waterbodies	Other	0	Cities	Other	0
Landcover class	Category	Rank																																												
Closed evergreen lowland forest	Forest	3																																												
Degraded evergreen lowland forest	Forest	3																																												
Closed deciduous forest	Forest	3																																												
Deciduous woodland	Forest	3																																												
Deciduous shrubland with sparse trees	Shrubland	2																																												
Open deciduous shrubland	Shrubland	2																																												
Closed grassland	Grassland	1																																												
Open grassland with sparse shrubs	Grassland	1																																												
Open grassland	Grassland	1																																												
Sparse grassland	Grassland	1																																												
Croplands (>50%)	Other	0																																												
Salt hardpans	Other	0																																												
Waterbodies	Other	0																																												
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Additional Information	<p>http://bioval.jrc.ec.europa.eu/products/glc2000/metadata.php?product=Africa</p> <p>DATASET DESCRIPTION</p> <p>Title of Dataset Vegetation Map of Africa</p> <p>Abstract 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 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.</p> <p>Keywords Global Land Cover 2000, Africa, Vegetation</p> <p>Language English</p> <p>Version / Edition 3.0</p> <p>Production Date 20/02/2003</p> <p>Status Complete</p> <p>CONTACT DETAILS</p> <p>Compiled by</p> <p>Institution Name : GVM, JRC</p> <p>Contact Name : Philippe MAYAUX</p> <p>Email : philippe.mayaux@jrc.it</p> <p>Web Link : http://bioval.jrc.ec.europa.eu/products/glc2000/glc2000.php</p> <p>Project Co-ordination</p> <p>Institution : Joint Research Centre</p> <p>Contact Name : Philippe MAYAUX</p> <p>Email : philippe.mayaux@jrc.it</p> <p>Web Link : http://www-gvm.jrc.it/glc2000/defaultGLC2000.htm</p>

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

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) • 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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Additional Information	

Weather variability

D_dryspells

Indicator name	Drought hazard index
Variable(s)	D_dryspells
Definition	Drought Hazard Index (DHI), which focuses on the probability of crop failure combined with the degree of rainfall variability. Low DHI indicates a relatively low chance of crop failure, and High indicates an increased probability of crop failure, due mainly to rainfall variability
Data Source	Limpopo River Awareness Kit, http://www.limpoporak.com , data originally from: Leira, E.M., Rafael, J., Bata, M.O., Mechisso, M., McNabb, M., Engelbrecht, R. Maló, S. 2002. Atlas for Disaster Preparedness and Response in the Limpopo Basin. Available online at: http://edmc1.dwaf.gov.za/library/limpopo/index.htm Accessed on February 1, 2010 (by LimRAK)
Sample size	Sub-Saharan Africa and Madagascar
Spatial scale	Not known
Year of data	
Year of publication	2002
Methodology	Create a raster, then use ‘Spatial Analyst/Zonal/Zonal Statistics as Table’ to extract the Mean Drought hazard per district per district in the basin.
Copyright	Limpopo River Awareness Kit, DWAF-SA
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	
Additional Information	

Fields to display

Total population

Indicator name	Total population
Variable(s)	population
Definition	Total population per district (2002)
Data Source	ZimStat. 2004. <i>National profile – 2002 Population Census</i> , Central Statistics Office, Zimbabwe: Harare
Sample size	Census population
Spatial scale	District
Year of data	2002
Year of publication	2004
Methodology	Data taken directly from source
Copyright	Zimbabwe Statistics Agency 2004
Additional Information	

Mean annual rainfall (mm)

See D_MAR

Total cropland area (ha)

See D_cropland

Poverty level (%)

See **Error! Reference source not found.**

Food security (%)

See D_food_sec

Glossary of variables for Zimbabwe:-

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	Number of surface water bodies per km ² per district
D_water_infr	
D_wpermit	
D_salinity	
D_numCBOs	Number of major NGOs active in the district per 1000 population
D_voting	
D_interests	
D_disputes	
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, 2010-11
D_remittances	
D_own_land	Proportion of households who own agricultural land
D_avg_plot	Average area of land cultivated by each agricultural household (ha)
D_unemploy	(Usual) Rate of unemployment (%) in 2011
D_femHH	The proportion (%) 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	
D_gratio	Ratio of women to men in the population
D_gemployment	Ratio of women to men who are employed
D_fem_assets	
D_avail_MFI	
D_poverty	Rural poverty level (%) (2011)
D_wsafte	Proportion (%) of households with access to an improved source of drinking water (household water connection, public standpipe, borehole, protected dug well, protected spring, rainwater collection and bottled water – if a secondary source is also improved)
D_food_sec	Proportion of households (%) that are food insecure (2011)
D_clinics	
D_work_pop	Working age population - Proportion (%) of total population aged 15 and above
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_literacy	Literacy rate - the proportion (%) of women and men (aged 15+) who have completed secondary schooling or higher, or can read a whole sentence, or can read a part of a sentence
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

	Zimbabwe: one or more draught animals
D_postharv_infr	
D_market	Median travel time to human settlement of 20,000 or greater population. (aggregation type: AVG)
D_transport	
D_cell_net	
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 Zimbabwe: 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
D_cropland	Total cropland area (including irrigated) (ha) (2000). (aggregation type: SUM)
D_slope	Proportion (%) of the district by area that is classed as flat (i.e. with < 8% slope, or a gradient <4.57°, according to FAO's Geonetwork slope classification - http://www.fao.org/geonetwork/srv/en/main.home#soils)
D_pop_dens	Average population density (people/km ²)
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	Drought Hazard Index (DHI), which focuses on the probability of crop failure combined with the degree of rainfall variability. Low DHI indicates a relatively low chance of crop failure, and High indicates an increased probability of crop failure, due mainly to rainfall variability
D_loss_prod	