



KERNKONSEPTE / KEY CONCEPTS/ KAKANYOKGOLO

FAKULTEIT / FACULTY: Natuurwetenskappe / Natural Sciences/ Disaense tsa Tlhago

SKOOL / SCHOOL/ SEKOLO: Omgewingswetenskappe / Environmental Sciences/ Disaense tsa Tikologo (Prof Huib van Hamburg)

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MODULEKODE EN –NAAM / MODULE CODE AND NAME/ LEINA LE KHOUTE YA MODULE: GGFN 111 Inleiding tot Omgewingsaspekte / Introduction to Environmental aspects/ Matseno go mabaka a tikologo

AFDELING 1 / PART 1/ KAROLO 1: Streeksgeografie en geomorfologie / Regional geography and geomorphology/ Thutafatshe ya tikologo le jeomofoloji

Kernbegrip in Afrikaans	Definisie/verklaring in Afrikaans	Key concept in English	Definition/explanation in English	Kakanyokgolo mo Setswaneng	Tihaloso/Thanolo mo Setswaneng
1. Streek	Dit is 'n ruimtelike uitdrukking van idees of opsommings en is handig vir die analisering van 'n spesifieke probleem. Die geograaf selekteer slegs daardie areaveranderlikes	1. Region	It is a spatial expression of ideas or summaries, useful for the analysis of the problem at hand. The geographer selects only those areal variables that contribute to the	1. Kgaolo	Ke tlhagiso ya maemo a popego ya dikakanyo kgotsa ditshobokanyo, e e leng mosola mo go sekasekeng bothata jo go lebaganweng nabo. Moithutafatshe o tlhophha fela dikgaolo tse di fetogang bonolo

	wat tot die begryp van 'n spesifieke aktuele of ruimtelike probleem bydrae, bv.: Die Mieliegordel van die V.S.A. dui slegs algemene kenmerke van landbou- ekonomie en markpraktyke aan. Verskille in die streek m.b.t. helling, grondtipe, bevolking en staatsgrense word geïgnoreer.		understanding of a specific topical or spatial problem, e.g.: The Corn Belt of the United States shows only common characteristics of farming economy and marketing practices. Differences within the region based on slope, soil type, population and state borders are ignored.		tse di nang le seabe mo go tlhaloganyeng bothata jo bo kgethegileng jo go buiwang ka bona thata. Sk.: Lefelo la Mabele la United States le bontsha fela dipharologantsho tse di tlwaelegileng tsa ikononi ya temo le ditiro tsa papatso. Dipharologantsho tse di mo kgaolong tse di ikaegileng ka go thulama ga naga, mofuta wa mmu, baagi le melelwane ya puso di a ikgatholosiwa.
2. Moho- onderbreking	Die kontakvlak tussen die aardkors en die mantel waar seismiese golwe gemodifiseer word. Die Moho is ongeveer 35 – 40 km onder die kontinente en 6–10 km onder die oseane.	2. Moho discontinuity	The junction between the earth's crust and the mantle where seismic waves are modified. The Moho is at about 35 – 40 km beneath continents and 6 – 10 km below the oceans.	2. Go kgaotsa ga Moho	Dikgatlho tse di mo magareng ga legogo la lefatshe le mentlele mo makhubu a seismiki a fetolwang gona. Moho o mo go 35 – 40 km kwa fa tlase ga dikontinente mme o 6 – 10 km kwa tlase ga mawatle.
3. Aardbewing	Dit is die rukbeweging wat dele van die oppervlakte ervaar wanneer druk binne die aardkors verlig word.	3. Earthquake	It is the jerking movement that parts of the surface experience when pressure within the crust is released.	3. Thoromo ya lefatshe	Ke go suta go go tlang ka go thufula go dikarolo tsa boalo go di itemogelang fa legogo la lefatshe le golola kgatelelo e kgolo.
4. Fokus	Die punt binne die aardkors waar die drukverligting plaasvind.	4. Focus	The point within the earth's crust at which the release in pressure occurs.	4. Tsepamo	Ntlha e e mo legogong la lefatshe e kgololo ya kgatelelo e tlhagelelang mo go yona.
5. Episentrum	Die oppervlaktepunt (bokant die fokus) wat	5. Epicentre	The point above the focus on the surface, usually	5. Leitlho la	Ntlha e e fa godimo ga tsepamo mo boalong, go le gantsi e

	gewoonlik die ergste getref word deur die skok.		receiving the worst of the shock.	thoromo	itemogela šoko e kgolo go feta.
6. Sial	Die sial, of kontinentale kors, is saamgestel uit ouer, ligter, granitiese tipe gesteente. Dit word oorheers deur minerale wat ryk is aan silika (Si) en aluminium (Al).	6. Sial	The sial, or continental crust, is composed of older, lighter rock of granitic type. It is dominated by minerals rich in silica (Si) and aluminium (Al).	6. Siale	Siale, kgotsa legogo la kontinente, le dirilwe ka lefika la mofuta wa keraniti. Le fekeetswa ke diminerale tse di humileng silica (Si) le aluminiame (Al).
7. Sima	Die sima, of oseaankors, is saamgestel uit jonger en digter gesteente van basaltiese samestelling. Dit word oorheers deur minerale wat ryk is aan silika (Si) en magnesium (Mg).	7. Sima	Die sima, or oceanic crust, is composed of younger and denser rock of basaltic composition. It is dominated by minerals rich in silica (Si) and magnesium (Mg).	7. Sima	Sima, kgotsa legogo la lewatle, le dirilwe ka mafika a mašwa a a boleta a a dirilweng ka baseletiki. A fekeetswa ke diminerale tse di humileng ka silica (Si) thata le makenesiamo (Mg).
8. Mineraal	Dit is 'n vaste chemiese verbinding wat gekenmerk word deur 'n bepaalde samestelling of 'n beperkte reeks chemiese samestellings en deur 'n spesifieke, reëlmatige bouwerk van die atome waaruit dit saamgestel is.	8. Mineral	It is a solid chemical compound that is characterized by a definite composition or a restricted range of chemical compositions and by a specific, regular architecture of the atoms that make it up.	8. Minerale	Ke tswako ya khemikhale e e komota e e tlhopiwang ka popego ya tota kgotsa ka dipopego tse di beetsweng mofuta ya dikhemikhale le ka moakanyetso o o kgethegileng, wa tlwaelo wa diatomo tse di o dirang.
9. Gesteente	'n Versameling van minerale. Gesteentes word verdeel in stollings-, sedimentêre en metamorfe	9. Rock	An assemblage of minerals. Rocks are divided into igneous, sedimentary and	9. Lefika	Kgobokanyo ya diminerale. Mafika a arogantswe ka mafika a ikeniase, sedimentari le

	gesteentes.		metamorphic rocks.		metamofiki.
10. Plooi	Die buig van 'n struktuur wat oorspronklik plat was, bv. 'n sedimentêre bedding. Die vervorming kan veroorsaak word deur óf horisontale óf vertikale kragte in die kors.	10. Fold	The bending of a structure that was originally planar, e.g. a sedimentary bed. The deformation may be produced by either horizontal or vertical forces in the crust.	10. Momeno	Go menagana ga popego e pele e neng e le polanara, sk. bolao jwa sedimentari. Poposešwa e ka tlhagisiwa gongwe ke maatla a a rapameng kgotsa a a tsepameng mo legogong la lefatshe.
11. Verskuiwing	Gesteentes gee op verskeie maniere mee onder vormende kragte: Sommige lae verkrummel in plooië, ander breek en nog ander plooi eers en breek daarna. Indien daar geen beweging langs 'n kraak plaasvind nie, word dit 'n voeg genoem. Indien daar aan weerskante van die fraktuur, sowel as parallel daaraan, verplasing van die gesteentes is, word die fraktuur 'n verskuiwing genoem.	11. Fault	Rocks yield to deforming forces in several ways: Some layers crumple into folds, some break, and some first fold and then break. If no movement takes place alongside a crack, it is called a joint. If there is displacement of the rocks on both side of a fracture and parallel to it, the fracture is called a fault.	11. Lengalegolo	Lefika le kuna go bopasešwa maatla ka ditsela tse di farologaneng: Dillaga tse dingwe di menagana go nna memeno, dingwe di a thubega, mme tse dingwe di menagana pele di bo di thubega. Fa go sa nne tshutatshuto epe go bapa le lenga, go bidiwa makopanelo. Fa go na le tlosoloso ya lefika mo matlhakoreng otlhe a thobego mo go lona, thobego e bidiwa lengalegolo.
12. Grond	'n Natuurlike stof van dierlike, minerale en organiese samestelling wat gedifferensieerd is in vlakke van wisselende diepte. Dit verskil van die materiaal daaronder in morfologie, fisiese samestelling,	12. Soil	A natural body of animal, mineral and organic constituents, differentiated into horizons of variable depth that differ from the material below in morphology, physical make up, chemical properties and	13. Mmu	Mmele wa tlhago wa phologolo, dikarolo tsa dimenerale le dilo tse di bolang, di farologangwa go nna tsa boteng jo bo farologanang go di farologanya le didiriswa tse di fa tlase mo dipoping tsa teng, modiro wa yona wa tota, dikarolwana tsa

	chemiese eienskappe en samestelling, en biologiese kenmerke.		composition, and biological characteristics.		sekhemikhale le popego ya teng, le dipharologantsho tsa thutatshelo.
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AFDELING 2/ KAROLO 2: Bevolkingsgeografie / Population geography

Kernbegrip in Afrikaans	Definisie/verklaring in Afrikaans	Key-concept in English	Definition/explanation in English	Kakanyokgolo mo Setswaneng	Tihaloso/Thanolo mo Setswaneng
1. Bevolkingsgeografie	Studie van die aantal, samestelling en verspreiding van bevolkings, met spesifieke klem op die mens-omgewingsinteraksie.	1. Population geography	Study of the number, composition and distribution of populations with specific emphasis on the human-environment interaction.	1. Thutafatshe ya Baagi	Thuto ya palo, popo le phatlalatso ya baagi ka go gatelela kgokagano ya batho le tikologo mo go kgethegileng.
2. Bevolkingsdigtheid	Die aantal persone wat op 'n gegewe oppervlakte woonagtig is (normaalweg 'n vierkante kilometer).	2. Population density	The number of people living on a given surface area (normally a square kilometer).	2. Teteano ya baagi	Palo ya batho ba ba nnang mo boalong jo bo rileng jwa lefelo (ka tlwaelo ke sekwere sa kilometara).
3. Ongesuiwerde geboortekoers	Die aantal lewende geboortes per 1 000 van die bevolking per jaar.	3. Crude birth rate	The number of live births per 1 000 of the population per year.	3. Kelopelegi e e sa tihotlhwang	Palo ya bana ba ba belegwang ba tshela mo 1 000 ya baagi ka ngwaga.
4. Ongesuiwerde sterftekoers/mortaliteitskoers	Die aantal sterftes per 1 000 van die bevolking	4. Crude death rate/mortality rate	The number of deaths per 1 000 of the	4. Kelo ya dintsho e e sa tihotlhwang/kelo	Palo ya dintsho mo 1 000 ya baagi ka

	per jaar.		population per year.	ya go swa	ngwaga.
5. Kindermortaliteit	Die gemiddelde aantal sterftes van kinders onder die ouderdom van 1 jaar per 1000 lewende geboortes.	5. Child mortality	The average number of deaths of children under the age of 1 year per 1 000 live births.	5. Go swa ga bana	Palogare ya palo ya dintsho tsa bana ba ba kwa tlase ga ngwaga o le 1 mo go ba le 1 000 ba ba belegweng ba tshela.
6. Verdubbelingstyd	Die tyd wat dit 'n bevolking neem om te verdubbel.	6. Doubling time	The time it takes a population to double its numbers.	6. Go oketsa nako gabedi	Nako e baagi ba e tsayang go oketsa palo ya bona gabedi.
7. Natuurlike aanwas	Die verskil tussen die jaarlikse aantal geboortes en sterftes per 1 000 van die bevolking.	7. Natural increase	The difference between the annual number of births and deaths per 1 000 of the population.	7. Koketsego ya tlhago	Pharologano magareng ga palo ya pelego tsa ngwaga le ngwaga mo go ba le 1 000 ba baagi.
8. Totale fertiliteitskoers	Die gemiddelde aantal kinders gebore vir elke kinderbarende vrou per jaar, gemeet teen die huidige syfer vir die bepaalde ouderdom. 'n Totale fertiliteitskoers van 2.1 is nodig om 'n gegewe bevolking te vervang.	8. Total fertility rate	The average number of children born to each child-bearing woman per year, measured against the current number for the specific age. A total fertility rate of 2.1 is necessary to replace a given population.	8. Kelogotlhe ya monono	Palogare ya palo ya bana ba ba belegweng ke mme mongwe le mongwe yo o santseng a belega ka ngwaga, e lekanyediwa kgatlhanong le palo ya ga jaana ya dingwaga tse di rileng. Kelogotlhe ya monono ya 2.1 e botlhokwa go emela baagi ba ba

					rileng.
9. Bevolkingsgroeikoers	Dit is enige natuurlike verandering in die bevolking, uitgedruk as 'n persentasie (verandering kan toename of afname wees).	9. Population growth rate	It is any natural change in the population, expressed as a percentage (change can be increase or decrease).	9. Kelo ya kgolo ya baagi	Ke phetogo nngwe le nngwe e e tlwaelegileng, e tlhagisiwa e le phesente (phetogo e ka oketsega kgotsa ya fokotsega).
10. Afhanklikheidsratio	Dit is die getalsverhouding tussen die ekonomies afhanklike deel van die bevolking (kinders onder 14 jaar plus persone bo 65 jaar) en die ekonomies aktiewe deel van die bevolking (persone van werkende ouderdom, d.w.s. 15 – 65jaar).	10. Dependence rate	It is the ratio number between the economic dependent part of the population (children under the age of 14 plus persons above the age of 65) and the economic active part of the population (persons of working age, i.e. 15 – 65).	10. Kelo ya baikaegi	Ke palo ya kabo magareng ga karolo ya baagi ba ba ikaegileng ka ikonomi (bana ba ba kwa tlase ga 14 ba tlhakane le batho ba ba kwa godimo ga dingwaga di le 65) le karolo ya baagi e e matlhagatlhaga mo ikonoming (batho ba ba mo dingwageng tsa go ka dira, e bong 15 - 65).