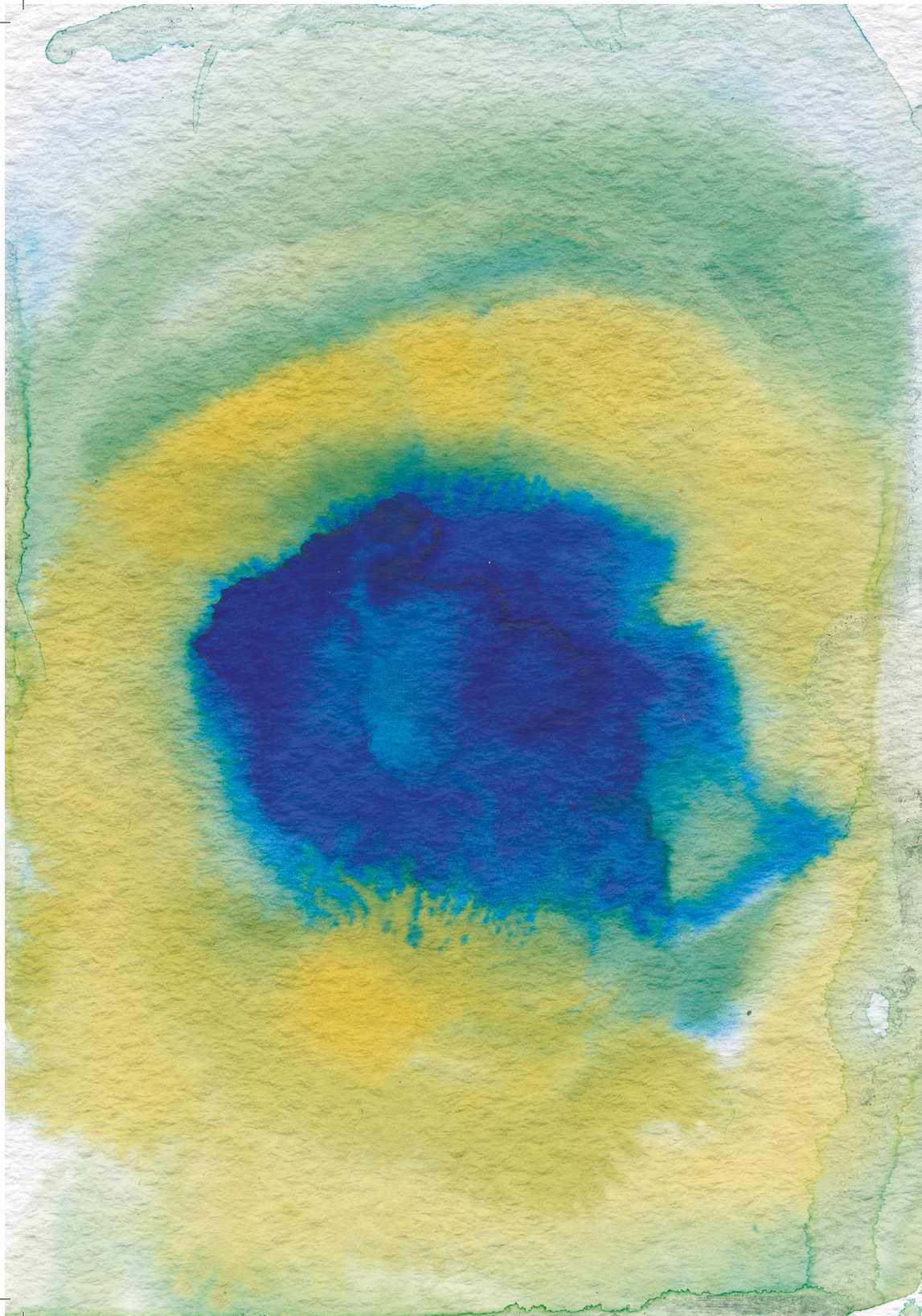


IMATAK ALLPA MAMA KUYURISHKAKA KAN

Imatatak rurana kanchik





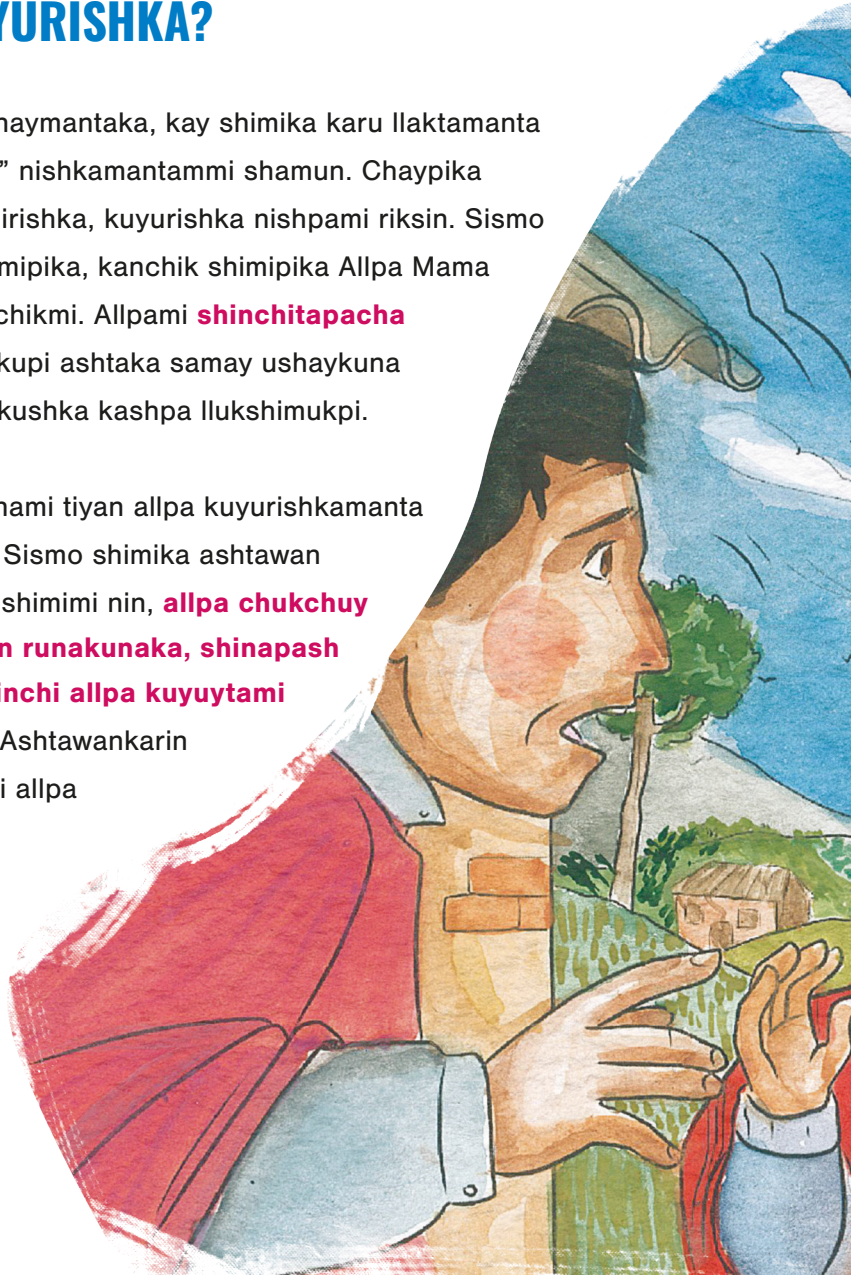
**IMATAK ALLPA MAMA
KUYURISHKAKA KAN**
Imatatak rurana kanchik



¿ALLPA MAMA KUYURISHKA?

Etimologia yachaymantaka, kay shimika karu llaktamanta shimi “seismos” nishkamantammi shamun. Chaypika imapash chaspirishka, kuyurishka nishpami rixsin. Sismo ninmi mishushimipika, kanchik shimipika Allpa Mama kuyurishka ninchikmi. Allpami **shinchitapacha** kuyurin allpa ukupi ashtaka samay ushaykuna unayta tantanakushka kashpa llukshimukpi.

Tawka shimikunami tiyan allpa kuyurishkamanta rimankapakka. Sismo shimika ashtawan yachakkunapa shimimi nin, **allpa chukchuy nishpami rixsin runakunaka, shinapash mana yapa shinchi allpa kuyuytami shina rixsin**. Ashtawankarin terremoto ninmi allpa kuyurishpa ninantapacha llaktakunata shitashpa llakichikpi.







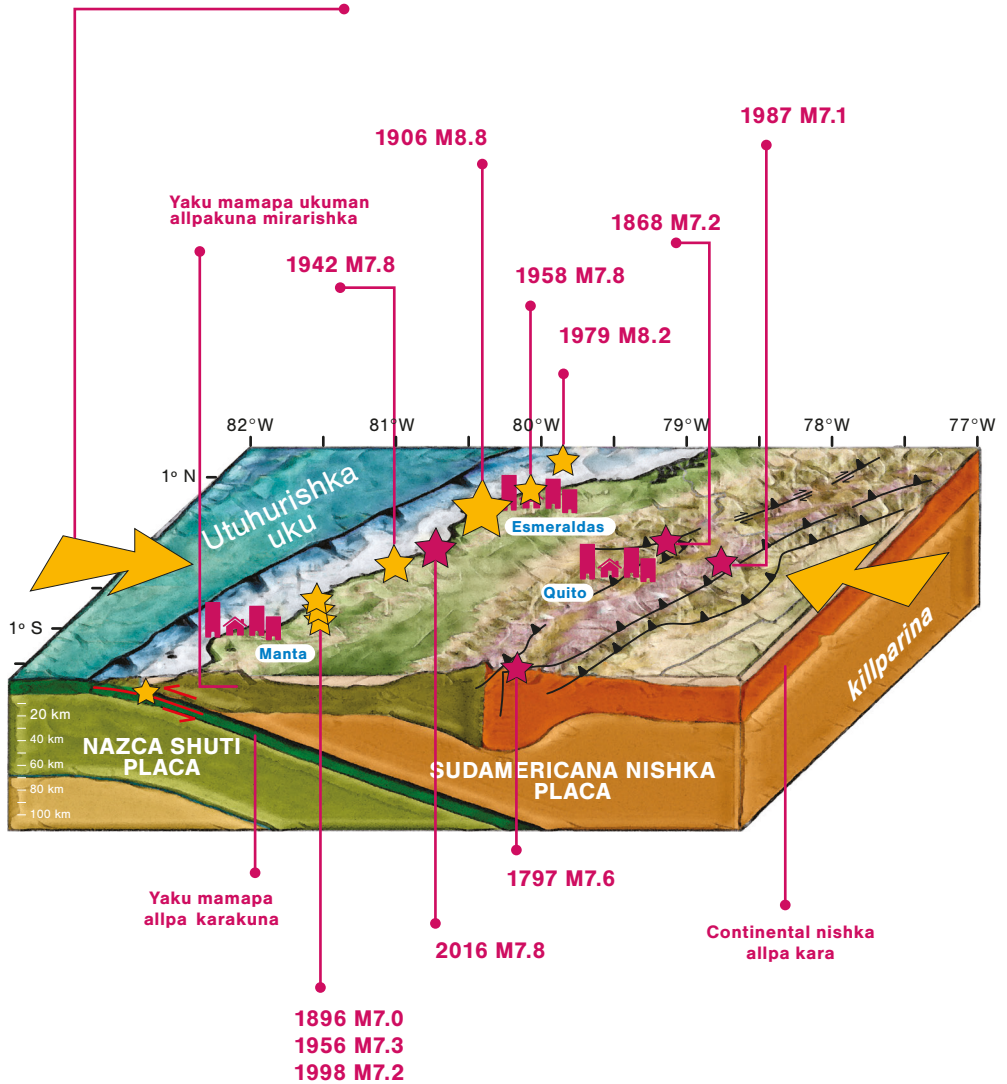
IMASHATAK ALLPA MAMAKA KUYURIN

Wakinpika ñukanchik allpa mamaka mana kuyurinchu yanchik, shinapash mana shina kanchu. Litosfera (ninchikmi paypa hawalla allpakarata), payka rompecabezas shinami piti piti pakirishka kan. Kaykunatami **placas tectónicas** nishpa riksinchik. Chaykunami asha asha allimanta kuyurin shinapash ñukanchikka shina kuyurikipash mana yaypi kanchikchu (ashana yupaykunatami kuyurin tukuy watapika)

Placas tectónicas nishka allpakunaka hatun hatunkunami kan, rakullakuna kan, shinallatak llasha llashakunami kan. Litosfera ukupimmi kay hawalla allpakara o corteza nishka tiyakunka, chaymi asha amuklla nin, payka achka ushaykunatami tantachin ashtawanpachaka imapash kuyurishpaka waklinalla kan nin. Paykunaka manyamanmi tiyanakun, shinallatak ñapash kuyurinatalami munakunka paypa ukupi **llashak ushayta** tantachishka kashpaka.

Kay Ecuador mamallaktapika ashtawan hatunpacha allpa mama kuyurishkaka kanmi, **chay 2016 watapi, Pedernales kitipi 7.8 kamanmi sinchi shinchi allpa kuyurishkanka**. Chaypika 700 runakunami wañushka nin, shinallatak 7000 runakunami chukrishkanka, 22000 runakunami wasi illa sakirishkanka, waranka wasikunami urmashkanka, shinallatak 200 hunu kullkikunami chinkarishkanka.

Placa Nazcamanta, Sudamerica placakaman chayankapakka kanmi 6cm/año





IMASHATAK ALLPA MAMAKA KUYURISHPA KATIN

Kay allpa mamaka kuyuriyta ushanmi chaypillata
chaypillata kutin kutin imashalla punta watakunapi
kuyurishka shinallata. Kaytami ciclo sísmico
nin, kutinlla shina shina puntashna allpa mama
kuyurishka shina. Kayka allpa ukupi samaykuna

tantanakushpa, sinchita **llukshimushpa**

kakpimi allpaka kuyurishpa kutinlla

kasilla sakirin. Shinami allpaka chay

kuskakunapillata kutin kutin kuyurinkalla

nin. Ashtawan sinchita allpa mama

kuyurishka kipaka, shuk uchilla

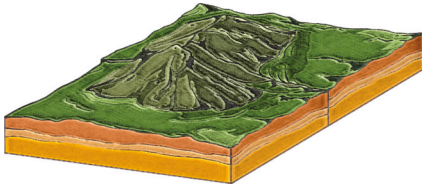
kuyurikkunami shamunka, chaytami

réplica nishpa riksirin. Chayka

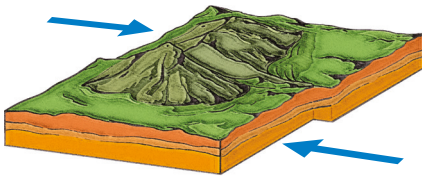
mana yapa sinchi kankachu.



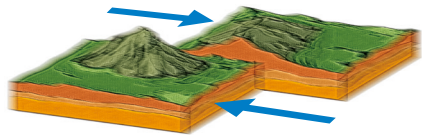
**RUMI SHUK SHUK
LAYA TIKRARIN**



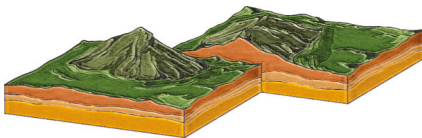
A. Kallapirika kashnami



B. Rumi shuk layaman tikrarihun

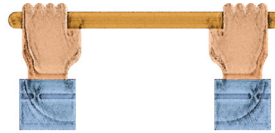


C. Allpa urmay kallarihun

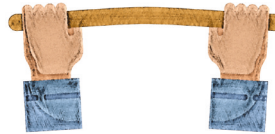


D. Allimanshnalla tikrarin

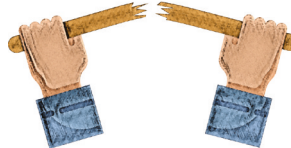
**KASPI SHUK
SHUK LAYA
TIKRARIN**



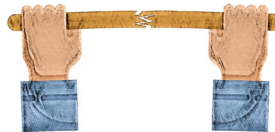
A. Kallapirika kashnami



B. Rumi shuk layaman tikrarihun



C. Kaspi pakirin



D. Allimanshnalla tikrarin



MAY HATUNTA KAN ALLPA MAMA KUYURISHPAKA

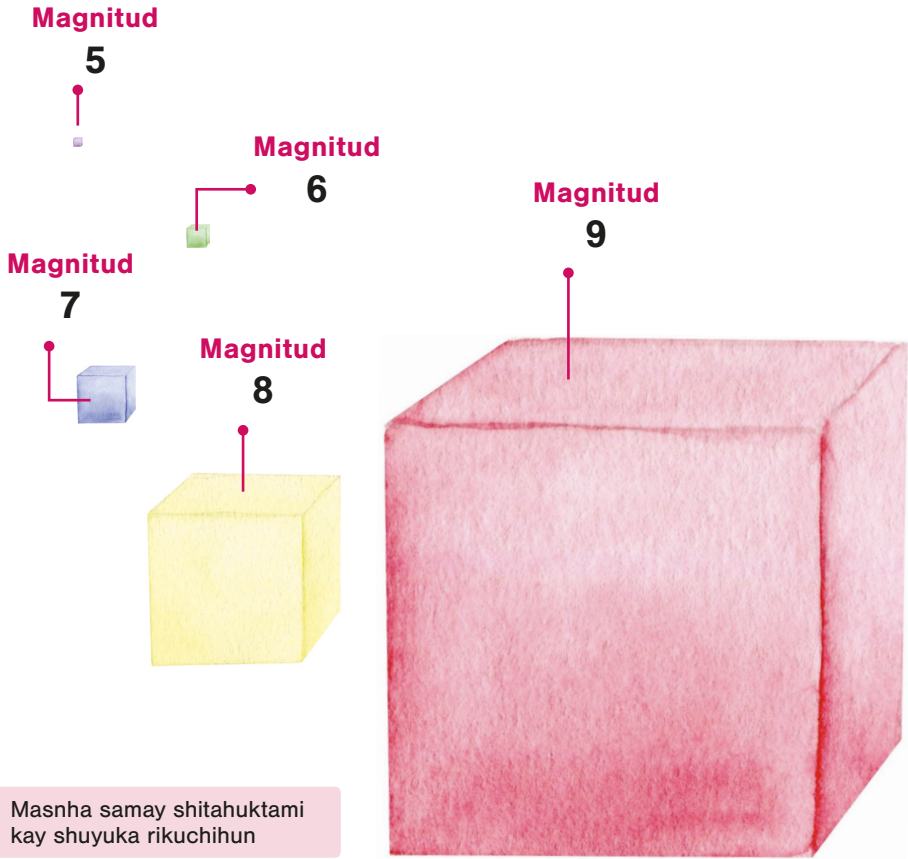
Allpa ukupi samayta unayta allichirishkami **sinchita llukshin**, chaytami allpa mama kuyurishka nishpa riksinchik. Masnha karuta kuyurishkatak yachankapakka shuk shukmi allpa kuyushkata allikuta yupashpa wakin chaypa hillaykunawan yacharin. Allpa mama kuyurishkata shinallata may karupi kuyurishka kashkatapash yacharin ninmi, chaymi sismo nishpa shutichin.

May karuta kuyurishkata rikunkapakka **escala logarítmica** nishka yachaywanmi yuparin, chaywanmi yacharin allpa mama kuyurishkaka shukpichu tupurin, mana kashpaka ishkaypichu tupurin, maykan kashpapash, ishkay chunka ishkaytami kutin kutin tikrashpa samayta allpa ukumanta llukchin ninmi. Kuti allpa mama kuyurishka kimsapi tupushka kakpika warankatami kutin kutin kuyurin nin, chashnami ashtawan hatun kuyuyka kanka. Shinallami tupurishpaka yacharinka imashalla hatun kakta, shinalla yupashpa katina.

Ashtaka tupunakunapi allpa kuyurishkapakka tiyan, chaymantami ashtawan riksirishka tuputa **Charles Richter** shuti kan. Kaytaka allpa kuyurita ashtaka yachakushka amawtami shina shuti kan, chaymanta shina tupunatapash shutichishka. Kay Ritcher tupunaka 7 yupaymanta urayman allpa kuyurishkakunatallami tupunkapak alli kan. Ashtawan hatun allpa kuyurishkata tupukunkapakka **magnitud de momento (Mw)** nishkawanmi shinarin.

Mashna samayatak allpa mama kuyurishpaka shitan

Pedernales llaktapimi ashtawan sinchipacha allpa mamaka kuyurishka, kay 16/4/2016 watapi. Paypa magnitudka kashkami 7.8 grados (kaypi mashna samayta shitashkaka, Hiroshimapi 30 waranka bombakunata shitashka shinami kashkanka).





IMASHA SINCHITAK ALLPAKA KUYURIN

Imashalla sinchi allpa mama kuyurishkataka runakuna imasha sinchi kakta **willakpimi yacharinka**, shinallatak **mashna llakikunata** apamushkata, mashna wasikunata, hatun wasichishkakunata shitashkata rikushpa, imashalla pampakunata waklichishkata rikushpami yacharinka imashalla sinchita

kuyurishkataka. Hatun sinchimi kashka ninkapakka maypi allpa mama kuyuri kallarishkamantatakmi rikuy kallarina, chaymantaka maykan allpa kuyurikuk kallaripi kashkakunaka ashtawanmi kuyuritaka sintinka, maykan ashtawan karupi kashpaka ashalla sintirinka mana kashpaka nimata.



Mashna sinchi kakta yachankapakka **Mercalli modificada**, nishkawanmi yachay usharin. Kayka chunka ishkey patakunatami charin (I-XII) kaypimi imashalla llakikunata apamushkata rikunka shinashpa asha asha mirarinka. Chaytaka romanos nishka yupaypimi rikuy usharinka ama chayshuk tupunapa yupaykunawan pantankapak.

Mercali intensi- dad nishka	Imalla llaki apashkata yachana
I. Yapa allilla	Nimata na yarin.
II. Allilla	Achikkuna ashata kuyurin, hatun wasikunapa allpa sarukuypash ashalla kuyurin.
III. Allillalla	Purik antawakunapash ñapash kuyurin, wasimanta uku allpapash kuyurin.
IV. Asha sinchi	Tukukuna shinallatak uchilla hillaykuna asha asha kuyurin.
V. Sinchi	Tukuylla runakuna allpa kuyukta sintin, yakupash kuyurin, tallirin.
VI. Yapa sinchi	Tukuylla runakunami sintin, vidriokunaka pakirin, pakirinalla hillaykunapash urman. Tiyarinakuna kayman chayman kuyurin, muyun.
VII. Yapapacha sinchi	Mana shayarita usharin, hatun wasikuna pakirin, kuchakunapash ashtawan kuyurin.
VIII. Waklichinalla kuyuy	Patakuna urman, imapash makiwan shinashka ruraykuna urman, wasikuna urman, hatun wasikuna urman, kirukuna pakirin, yakupash kayman chayman rin.
IX. Tukuyta shitanalla kuyuy	Allpa chiktarin, wakin ñankuna chiktarin, ashtaka llakikuna uyarin hatun wasikunapi, uchilla wasikunapi.
X. Kayta chayta kuyurin	Tukuy tuykuy wasi urman, kuchamanta, mayumanta yakupash llukshin.
XI. Yapatapacha kayta chayta kuyurin	Allpa waklin, purik antawapa ñankuna pakirin, allpa uku tubokuna tukuy tukuy pakirin, waklin.
XII. Tukuyta wañuchinalla kuyuy	Tukuy tukuy allpapi llaki apan, rumikunapash kuyurin, tukuy hillaykuna kayman chayman wayrapi kuyurin. Allpa mama imasha waklishkata rikurin.



IMASHATAK YACHARIN MAYPI ALLPA MAMA KUYUSHKATA

Ashtaka sinchillami kan, maypipash allpa mama kuyushkaka shinapash chashna **kuyurikta yachakuk amawtakunaka** wakin ñankunatami tarishka maypilla kuyurikta yachankapak. Tawka purik antawata umapi yuyarishun, kaykunaka shuk kuskamanta shuk shuk llukshishka uchalla kayman chayman. Chay antawakuna ima pachapi chayashkata, mayman chayashkata yachayta ushashpaka, ñapashmi asha yupaykunata rurashpa yacharinka maymanta llukshishkatapash, ima pachapi llukshishkatapash.

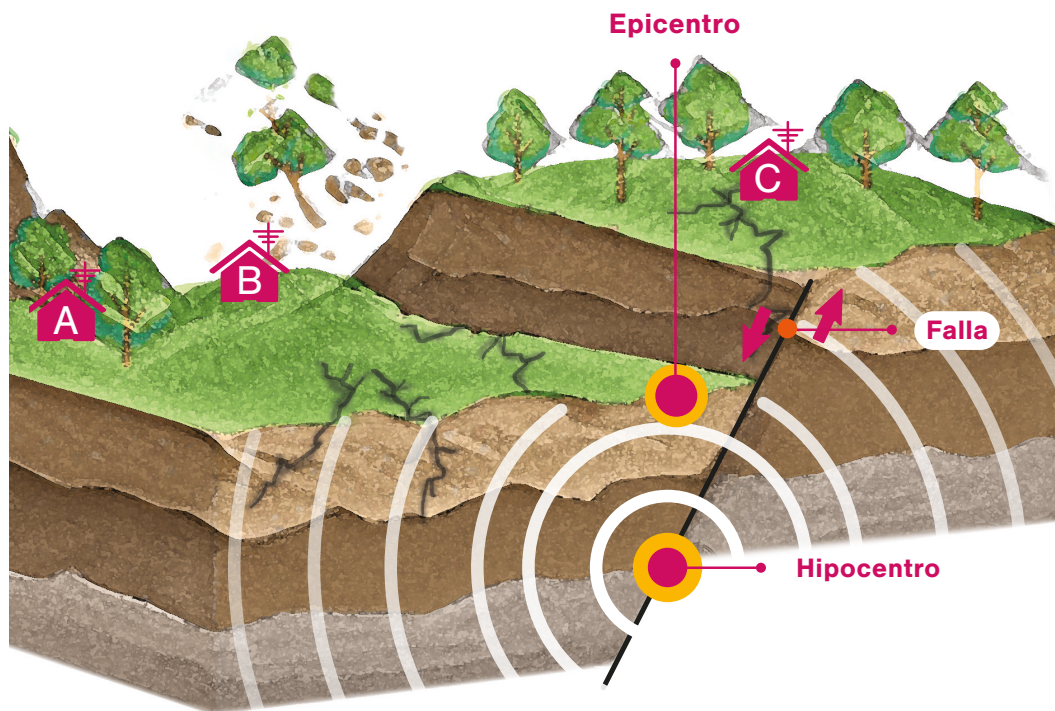
Imasha antawakuna llukshishkata yacharkanchik shinami allpa mama kuyurishkatapash yachay usharin. **Shinami maykamanlla kuyurishka** kuskakunata yaypi charishpaka ñapashmi yacharin ima puncha ima pachapi kuyuy chayamukta, chashnapash maymanta llukshimushkataka na yacharinchu. Kuyuykunata yachakunakuk amawtakunaka **imashalla kuyuykuna puriktami** allikuta yachakushpa kutin kutin rikun, ashalla purishkata, allimanta purishkata, ñapash purishkakunata rikun, shinami imashalla allpa ukupi kuyurishkata rikurinka. Chashna rikuytami yallichin shuk killkana antaman, chaymantami maypilla kuyurik kashkata rikuy ushanka.

Allpaka tawkalla karakunatami charin chaytami corteza ninchik. Chay karakunapimi **hipocentro** nishka tiyan, kay kuskamantallami yacharin maymanta allpa mama kuyuri kallarishkata. Kuti



hipocentro kuyurikpimi ñapash kaypa hawallapika **epicentro** nishkata rikuy usharinka, kaymi rikuchinka imashalla ukumanta kuyurishpa hawalla katimunka.

Yachankapak: maypilla allpa mama kuyurishkata yachankapak, imashalla kuyurishkata yachankapakpash tawka yupaykunatami rurashpa yacharinka. Shinallatak kaypa yupaykunaka shuk shuk llukshinkallami maykan rurashka kakpi, maymantalla allpa kuyurishpa kakpi, shinallatak ñapashchu uchallachu kuyurishkata yachashka kashpa.





CHIMBORAZO MARKAPI ASHTAWAN SINCHI ALLPA MAMAKU KUYURISHKAKUNA

Ecuador mama llaktapika costa ladupimi ashtawan sinchita allpa mamaka kuyurinlla, shinallatak Andispipashmi shinchita kuyurinkalla, allpa uku karakuna shuk shukmi mana yapa sinchi asintarishka kanka, shinallatak samaykunapash yapata tantanakushka kanka, chaymantaka sinchita allpa ukumanta llukshikpimi allpa mamaka kutinlla sinchita kuyurinka.





IMA PACHAPI KUYURISHKA	IMA SINCHITA KUYURISHKA	IMASHATA KUYURISHKA
15/03/1645	IX	Tukuylla markapimi sinchita kuyurishkanka. Tungurahua urkupash ninanta kuyurishkanka. Kutin kutin kuyurishkanka, ashtaka wañuy tiyashkanka.
29/08/1674	IX	Chimbo llaktapimi ninanta llaki chayashkanka allpa kuyurishpaka. Ashata runakunami kawsak yallishkanka. Urkukuna urmashpa kayman chayman tallirishkanka.
10/05/1786	VIII	Riobamba kitipimi ashkata llaki shamushkanka, shinallata kimilla ayllullaktakunapipash. Chaymanta allpa wasikunaka tukuyllami urmashkanka.
04/02/1797	XI	Cushca urkumi tukuy tukuy urmamushpa chaymanta kititaka killpashkanka. Chaypika 25.000 runakunami wañushkanka. Kaypi imashalla allpa mama yapata kuyurishkamantami kunanka mushusk Riobamba wiñarishkanka.
23/09/1911	VIII	Tukuylla Chimborazo markapimi allpa sinchitapacha kuyurishpaka llakichishkanka, tukuylla (90%) wasikuna, hatun wasikunapash urmashkanka. .
08/04/1961	VIII	Chimborazo markapi ashta llaki tiyashkanka. Tapiawan, allpawan wasichishkakunaka ashtakami urmashkanka. Allpaka urayman shamushpa killpamushkanka tukuylla ñankunata. Tukuylla mamallaktapimi allpa mamaka kuyurishkanka.




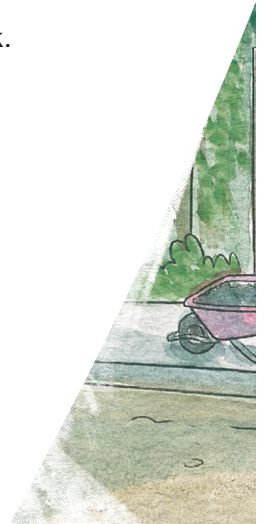
ALLPA MAMA MANARAK KUYURISHKAKPIKA IMATATAK RURANA

Allpa mama kuyurishpa ama yapa llakichichunka kaytami shinana.

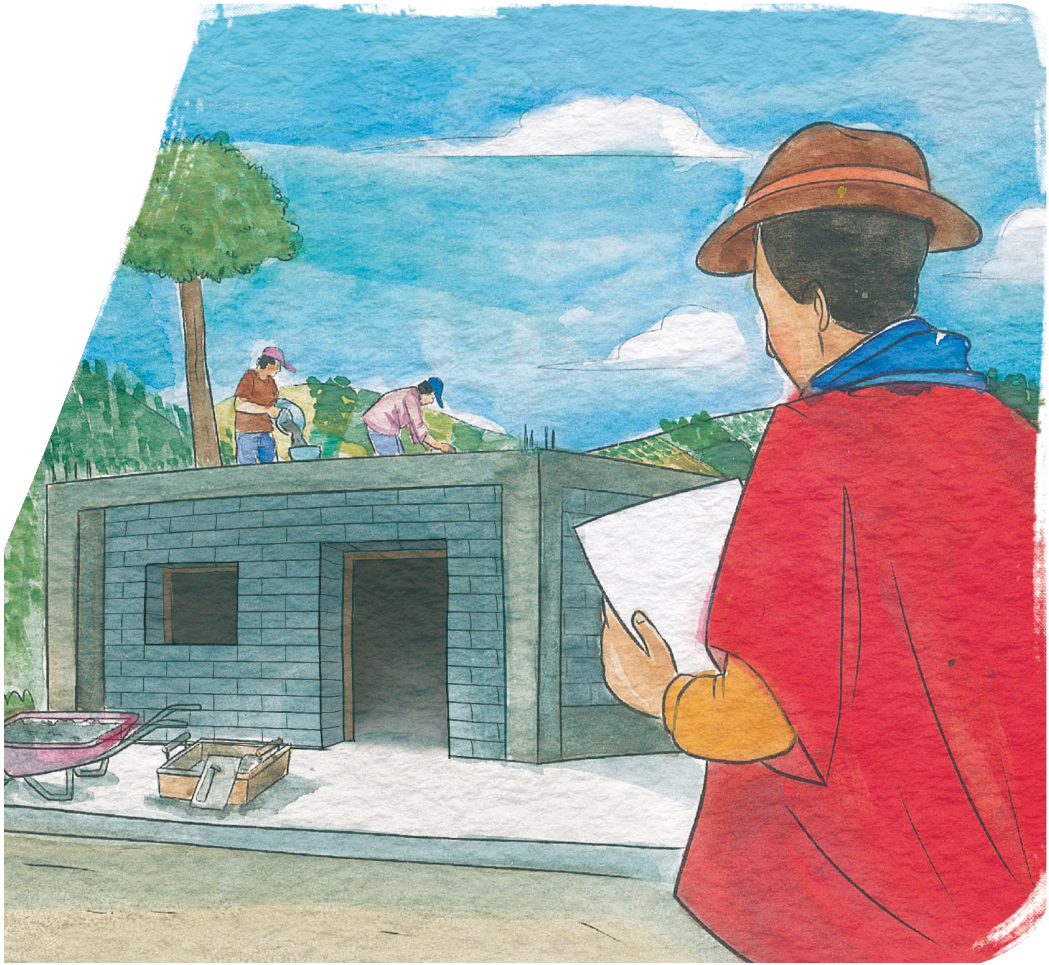
 **Sinchilla wasitami wasichina**, chaypaka allikuta chayta yachakkunata tapushpa shinallatak allikuta rikushpa alli hillaykunata rantishpa wasichina. Chashnallatak na pata hawapika wasichinallu. Wasichishka kipapash na imatapash pirkapi/wasi hawapi warkuchishka charinachu, chaykunaka ñukanchikpi urmamushpa llakichinkallami.

 Wasi ukupi, **tukuylla ayllukunawanmi rimana kanchik** imatalla rurana allpa mama kuyurikpika: tukuylla yachana kanchik, shinallatak tukuylla mayta llukshinata yachana kanchik, maykan kuskaman chayashpa shuyanatapash yachana kanchik. Chaytaka manara allpa mama kuyukpillata rurashpa, rimashpa alli yachakuna kanchik.

 Ñukanchik **emergenciapa shigrapimi** kayta charina kanchik: shimi killparinata, mana ismunalla mikunata, yakuta, rimana antapa pilata, achikyachikta, kunuklla churakunata, katanata, mutsurinalla hampita, kikinpa, kikin ayllupa cédulakunata. Shinallatak allkuta, misita charishpaka paykunapa shigratapash na kunkanachu kanchik.



Yariyanki, allpa mama kuyurinkataka na yacharinchu ima pachapi shamunkata. Yankatallami wakinpika shuk shuk willi willikunapi, maypipash rimanka, chaytaka ama iñinkichu ama yankallata mancharinkichu. (Yankatami ninka)





IMATATAK SHINANA KANCHIK ALLPA MAMA KUYURIKUKPIKA

Kaytami rurana kanki ama imapash yapa pakirinki:

▲ Ama mancharishunchu. Kasilla samayta hapiy, chaymantaka kayta ruray: **kumuriy**, imawanpash killpariy, shinashpaka imapipash chariyariy. Imapipash killparinalla ukuta maskay, shuk patakutayma, shinallatak sawnawan umataka killparinki.

▲ Ña allpa mama kuyurishpa tukurikpika **uchalla llukshi ama kallpashpalla rinkichu**, kikinpa empergenciapa shigrata aparinki, chaypa kati shuk allillata ukuman rinki. Mana kanpa wasipi kaspaka, riy shuk allillata kuskaman, imapash michapa poste, imapash kirukuna illami kana.

Allpa mama kuyurishka kipaka chunka uchilla pachakunata shuyanki, ama kutin kuyurichun shuyana kanki. Chay kipaka kikinpa ayllukunata maskana kanki, willana **kanki mensajeta kachana kanki kikinpa willi willimanta**, tukuyllami ashtaka kayanakunka chaymanta mana yapa rimaytaka usharinkachu.





IMATATAK SHINANA KANKI ALLPA MAMA KUYURISHKA KIPAKA

KIKINPA WASIMAN AMARA YAYKUNKICHU, KAYTARA RURANA KANKI:



Kikinpa wasimanta yakuta wichana kanki, tanque de gastapash wichana kanki, michatapash wañuchina kanki, shinallami imapash mana tukyanka, mana rupanka, mana imapash hapirinka.



Allimanta kikinpa wasita rikunki, shinallatak imapash waklishkata maskana kanki. Imapash hawalla waklishkakkpika yaykunallami kanki, shinapash pirka, columna, wasi hawa, pakirishka rikurikpika uchallami karuyana kanki, shinashpa maykan chashnakunata allichik runata maskana kanki, yanapachun.

ALLPA URMAMUSHPA KIKINTA KILLPAMUKPIKA:



Ama ninata hapichinkichu.



Ama kuyurinkichu, nima na kuyurinachu.



Shimita killpari imapash pintuwan, imapash kikinpa churakunawan.



Imapash hatun tubopi, pirkapi waktana kanki, shinallami runakunata maskakkuna kikinta tarinka. Nimata na shinayta ushashpaka kaparinkilla. Kaparishpaka allpata lankayta ushankimi.

Kutin, allpa, rumi tukuy killpashkata pichankapak munashpaka, allikutami umata, shimita, ñawita killparina kanki, allikuta churakunata churarishpa kana. Chaymantaka alli **willaykunata uyanki,** shinallatak **apakkuna ima nikta katinki.**



INSTITUTO GEOFÍSICO DE LA EPN

1983 watapimi wacharishka Instituto Geofísico de la Escuela Politécnica Nacional (IG-EPN), chay watamantami allpa mama kuyurishkataka rikushpa shamun ñukanchik mamallaktapi. 2003 watamantami Ecuador mamallaktapa apakkunaman llamkay kallariyka, shinami paykunaka allpa mama kuyuriyta yachakushpa amawtakuna tikrashpa shamushka. IG-EPN wasi tantanakuyka Red Nacional de Sismómetros nishkatami kamashpa shamun, chaypika 100 kuskakunatami allpa mama kuyurinalla ukukunata rikushpa shamun. Chaymanta 24/7 llamkamunakun, alli alliman willaykunata allpa mama kuyurikpika ñukanchikman karankapak.

PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO (PNUD)

Shuti tantanakuypashmi Ecuador mamallaktapika 54 watakunata kashka. Kay tantanakuypa tukuy tiksimumyu pachamanta tantanakuypunawanmi watarishka kan, shinashpa ñukanchik Ecuador mamallaktapika runakunapa desarrollomanta llamkan. Shinami tukuy llaktakuna ashtawan ñawpaman katichun maskan, wakcha unkuy tukurichun llamkamun, runakunapa kamachinakuykuna tiyachun, apakkuna alliman llaktakunata apachun llamkan, tukuylla runakuna alliman kawsachun munaywan llamkan. Ecuador mamallaktata tukuy shuk ladukunamanta yachaykunawan watachin, shinallatak tukuy kay mamallaktamanta runakuna ashtawan ñawpaman rita ushachunmi llamkan. Kay killkayka paykunapa yanapaywanmi rurarishka: *Preparación ante desastres y recuperación en zonas indígenas propensas al impacto de múltiples amenazas y riesgos (ECHO/-AM/ BUD/2021/91025)*, ECHO (Oficina de Ayuda Humanitaria de la Comisión Europea). tantanakuymi kullkita kushka.

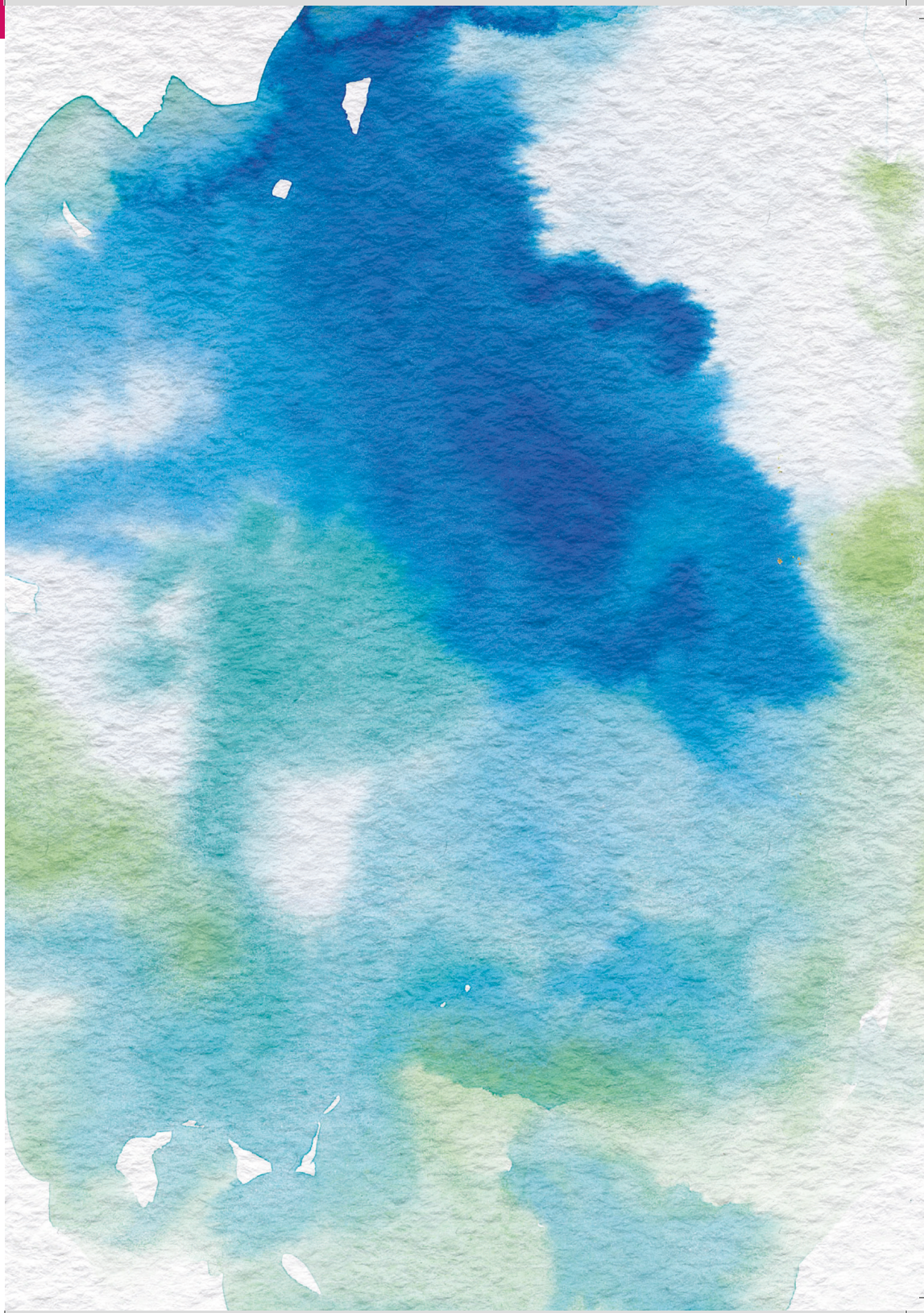
Shuyushka, killkashka: D. Sierra, E. Telenchana, A. Vásquez, B. Bernard.

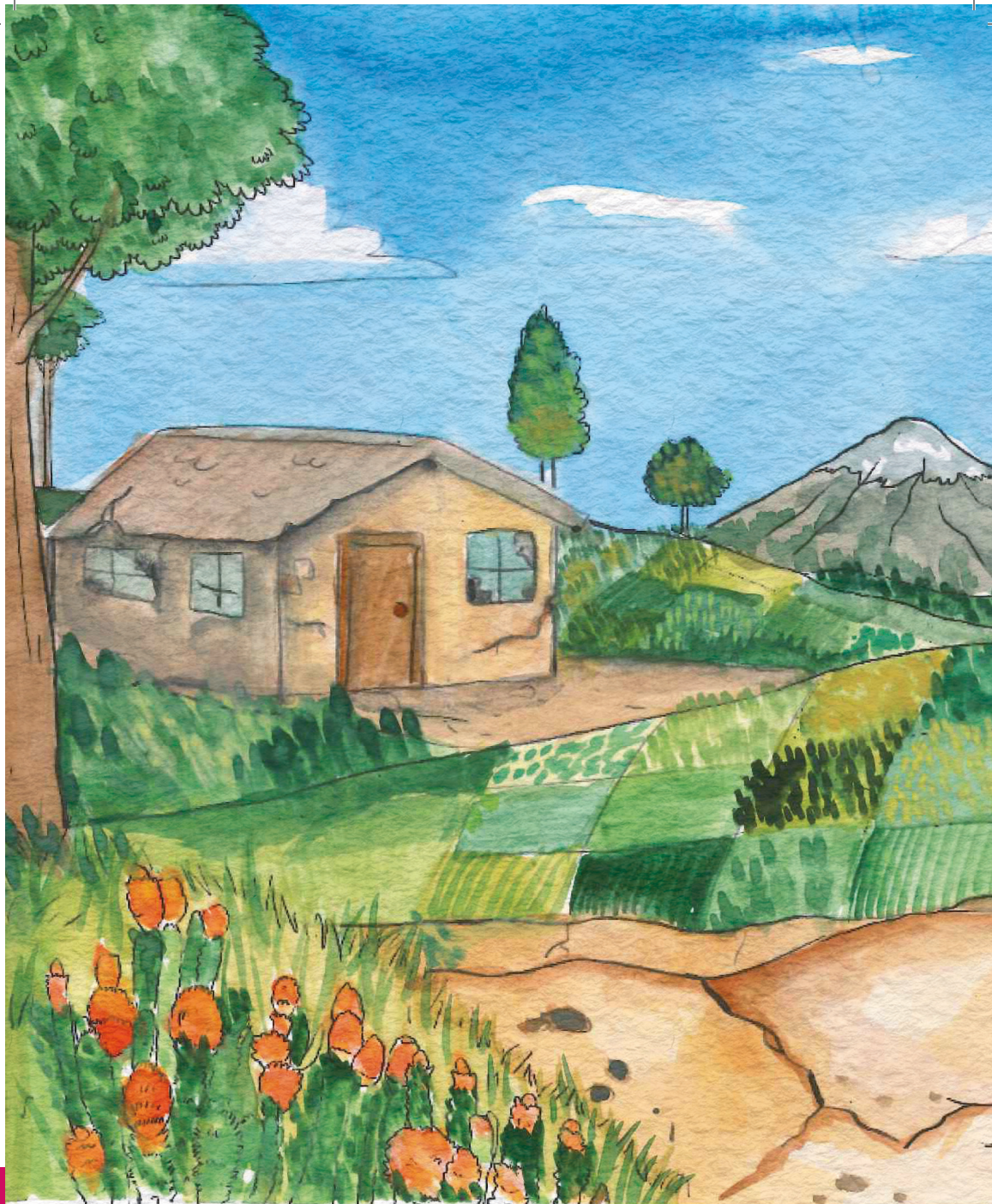
Alli killkakatishpa rikushka: S. Vaca

Shuyushka: LAINCRE S.A.

Kamu rurashka: LAINCRE S.A.

Notas





IMATAK ALLPA MAMA KUYURISHKAKA KAN

Noviembre killapi 2022 watapi killkashpa pankapi rikchata llukchishka
Quito kitipi, Ecuador mamallaktapi