

What is Mountain-Evo?

Mountain-Evo is a shared virtual observatory of remote mountain socio-ecological systems for poverty alleviation. Put the updated blurb and explanation about the site in here so that people get the website.

Data is being collected in four case study locations: Peru, Kryzgstan, Nepal and Ethipia

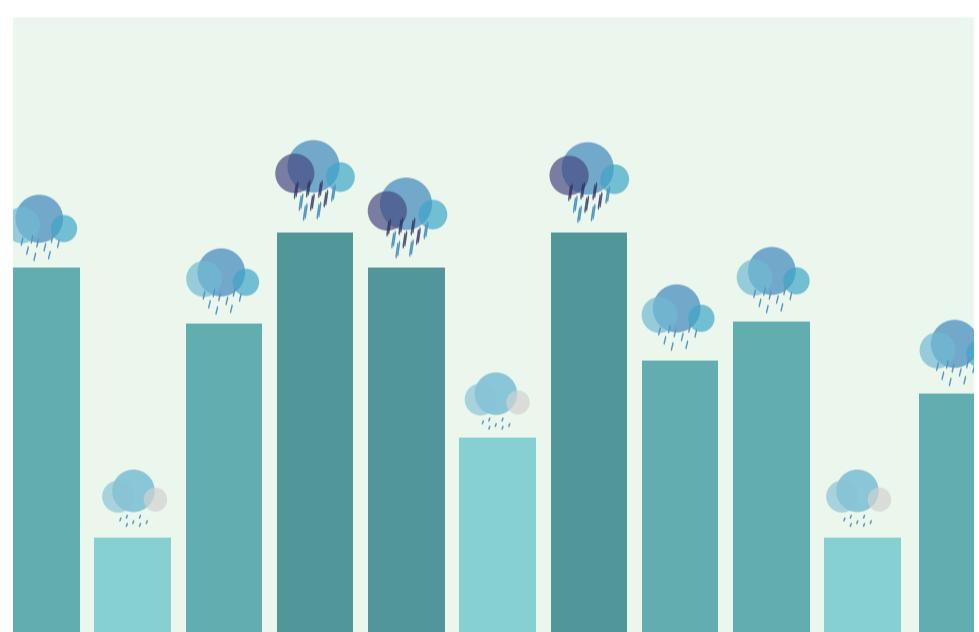
Explore two sections on Mountain-Evo:

Observatory

See temperature rainfall, and riverflow data collected, and learn about the sensors

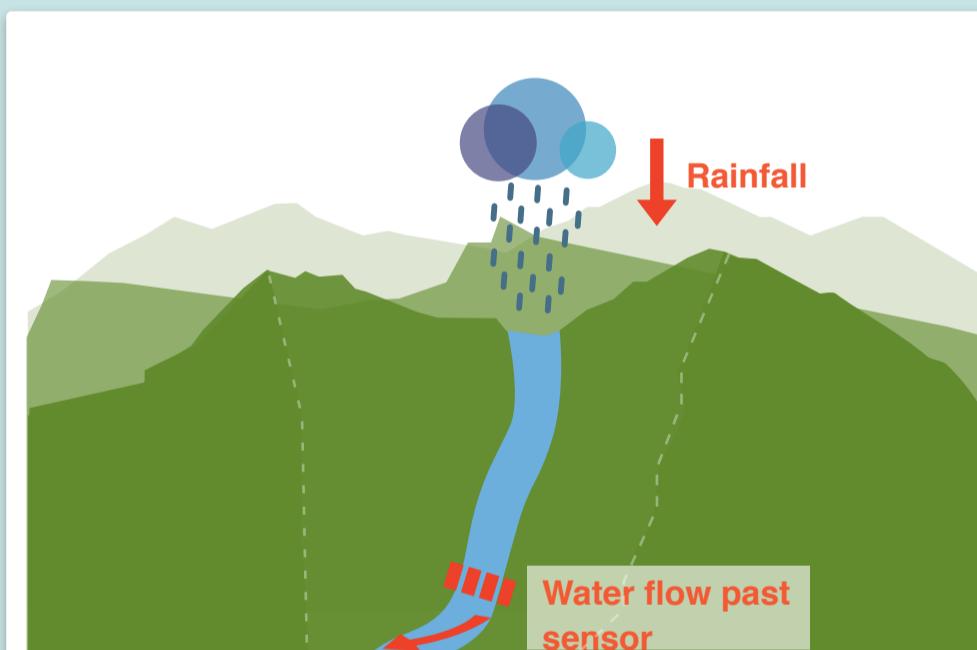
ESS indicators

Find out about Ecosystem Services, and check and compare ESS indicator scores



Observatory charts

View rainfall data for a location



ESS Indicators explained

Find out what base flow index shows



About the sensors

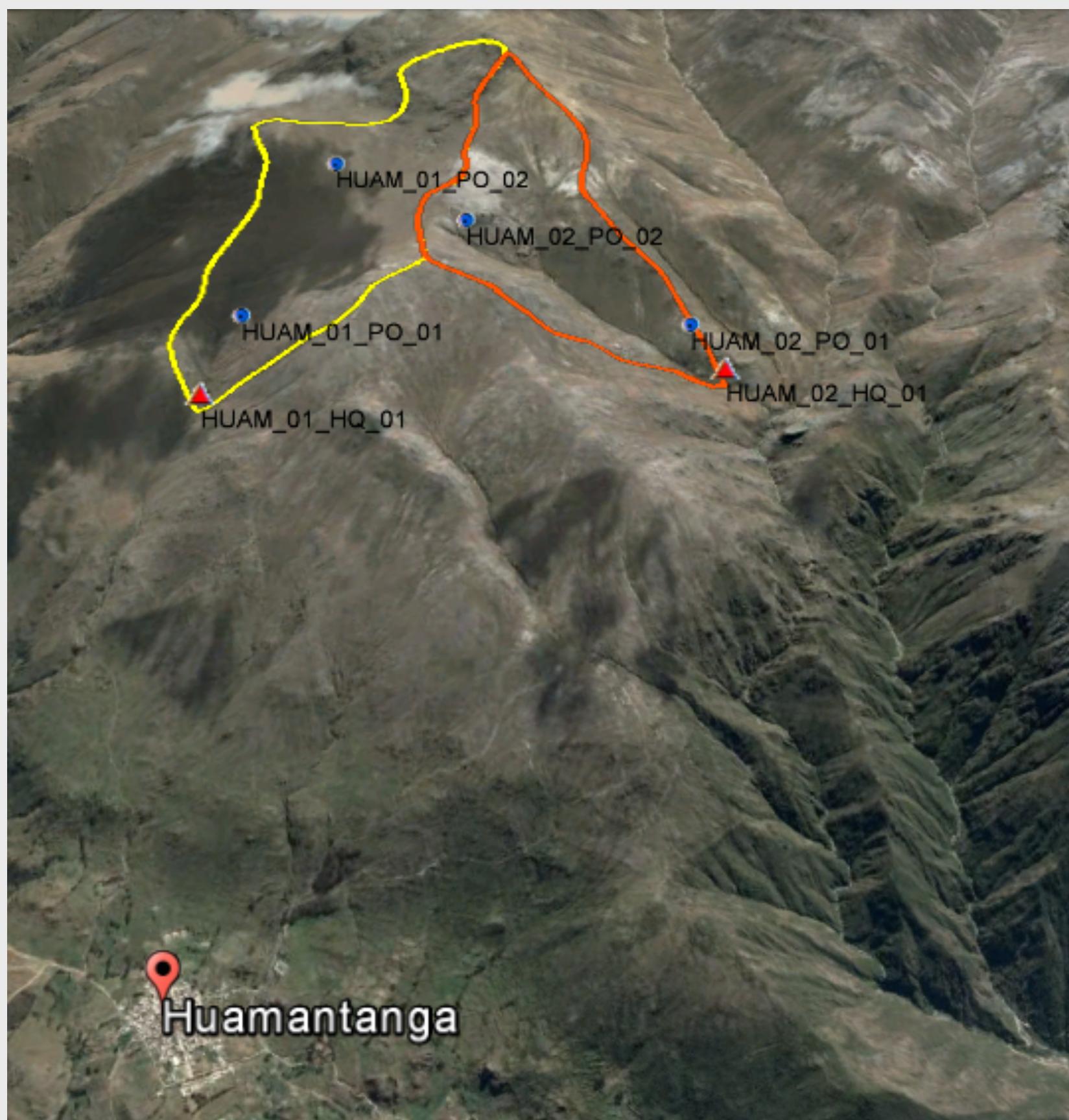
Learn how they measure data

Contact the MountainEvo team:
team@mountainevo.com

OBSERVATORY
VIEW DATA
ABOUT SENSORS
UPLOAD DATA

ESS INDICATORS
VIEW INDICATORS
ESS INDICATORS EXPLAINED

Use these graphs and maps to explore data collected by local environmental sensors. [Select a sensor location to get started.](#)



Select a location

Choose a location to view maps, or select a sensor to explore data collected

[Huamantanga](#)

A brief description of what makes this case study interesting/relevant

[View maps](#)

Explore satellite, land cover, soil type, and cattle movement maps

[Select sensor](#)

Pick a sensor to view rainfall, riverflow, temperature and tracer data

[Back](#)

Go Back and pick another location to view

[More locations](#)

How is this data collected?



Title of explanation

Explain what sensors are used, how data is collected etc

Explain

Explain.

[Read more link](#)

Find out about all the [types of weather sensor](#) used in these areas

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Huamantanga

A brief description of what makes this case study interesting/relevant

[Change location](#)

Select a sensor

Select a sensor to explore data they have collected

Rain sensors

[1 Rain sensor](#)

[2 Rain sensor](#)

[3 Rain sensor](#)

[4 Rain sensor](#)

River [name] sensors

[5 River sensor](#)

[6 River sensor](#)

Tracer sampling

[7 Tracers](#)

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Maps

Riverflow

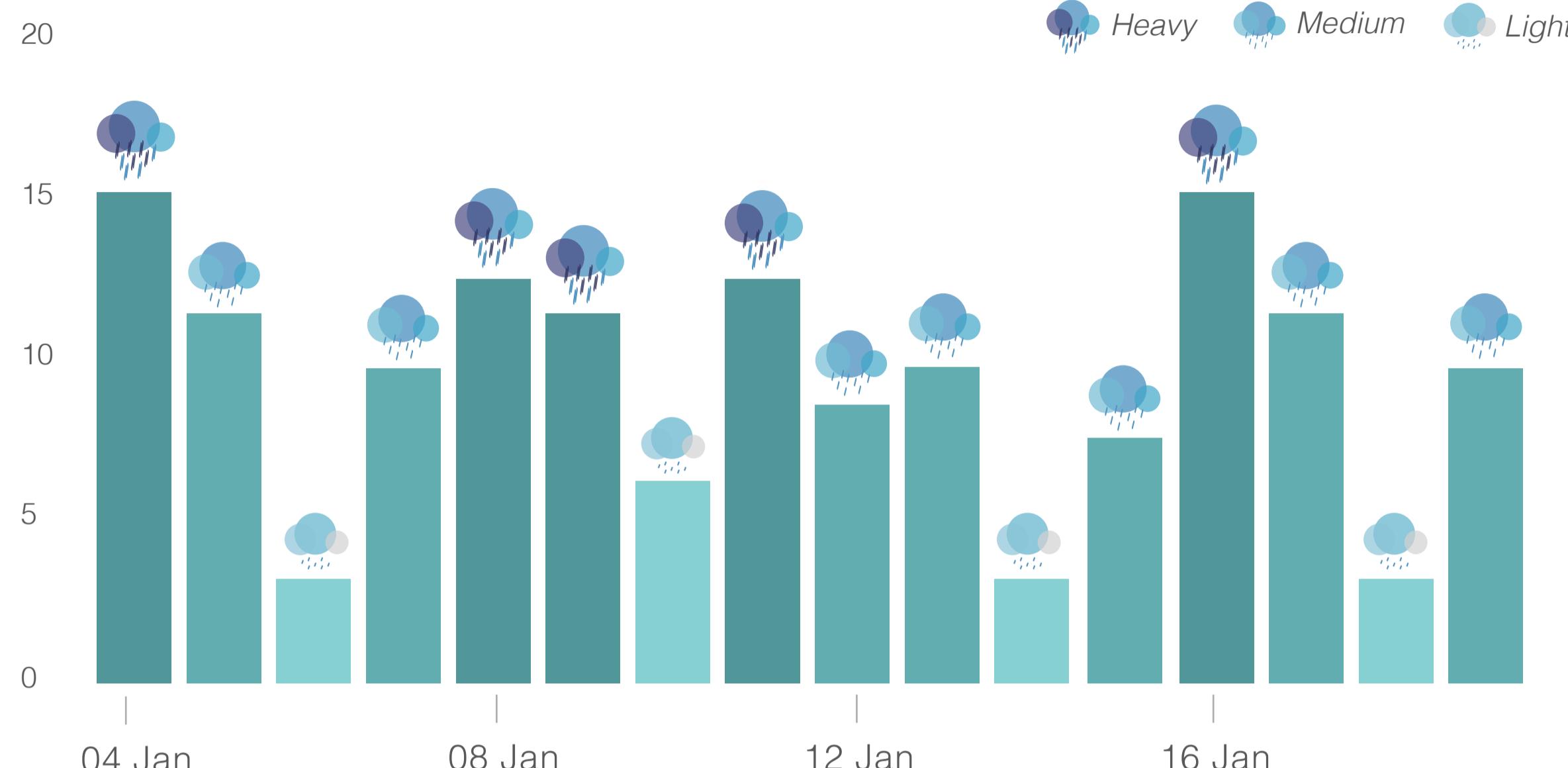
Rainfall

Temperature

Sensors

[+ Add sensor](#)
[↑ Upload data](#)
[Download .csv](#)

Rainfall in mm in Huamantanga from Rain Sensor 1

[Change location](#)


GRAPH

BAR CHART

TABLE

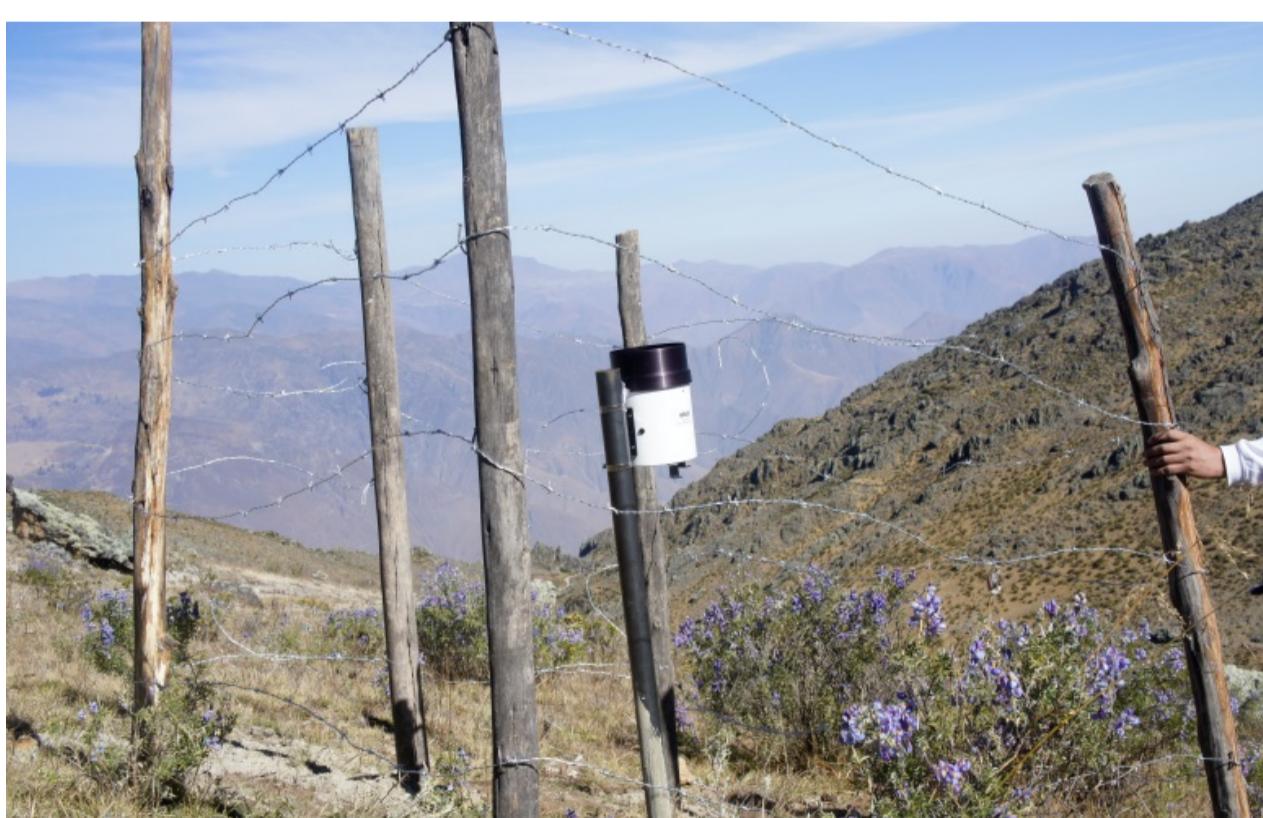
Date range

[Feb 2015 ▾](#)
[Mar 2015 ▾](#)


Data resolution:

[Daily](#)
[Weekly](#)
[Monthly](#)
[Yearly](#)

How is this data collected?



Title of explanation

This chart shows rainfall in the catchment area. 1 mm of rain is 1mm in the pluviometer, which means 1 liter of water over 1 m².

[Read more link](#)
[Find out about all the types of weather sensor used in these areas](#)

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 Maps

 Riverflow

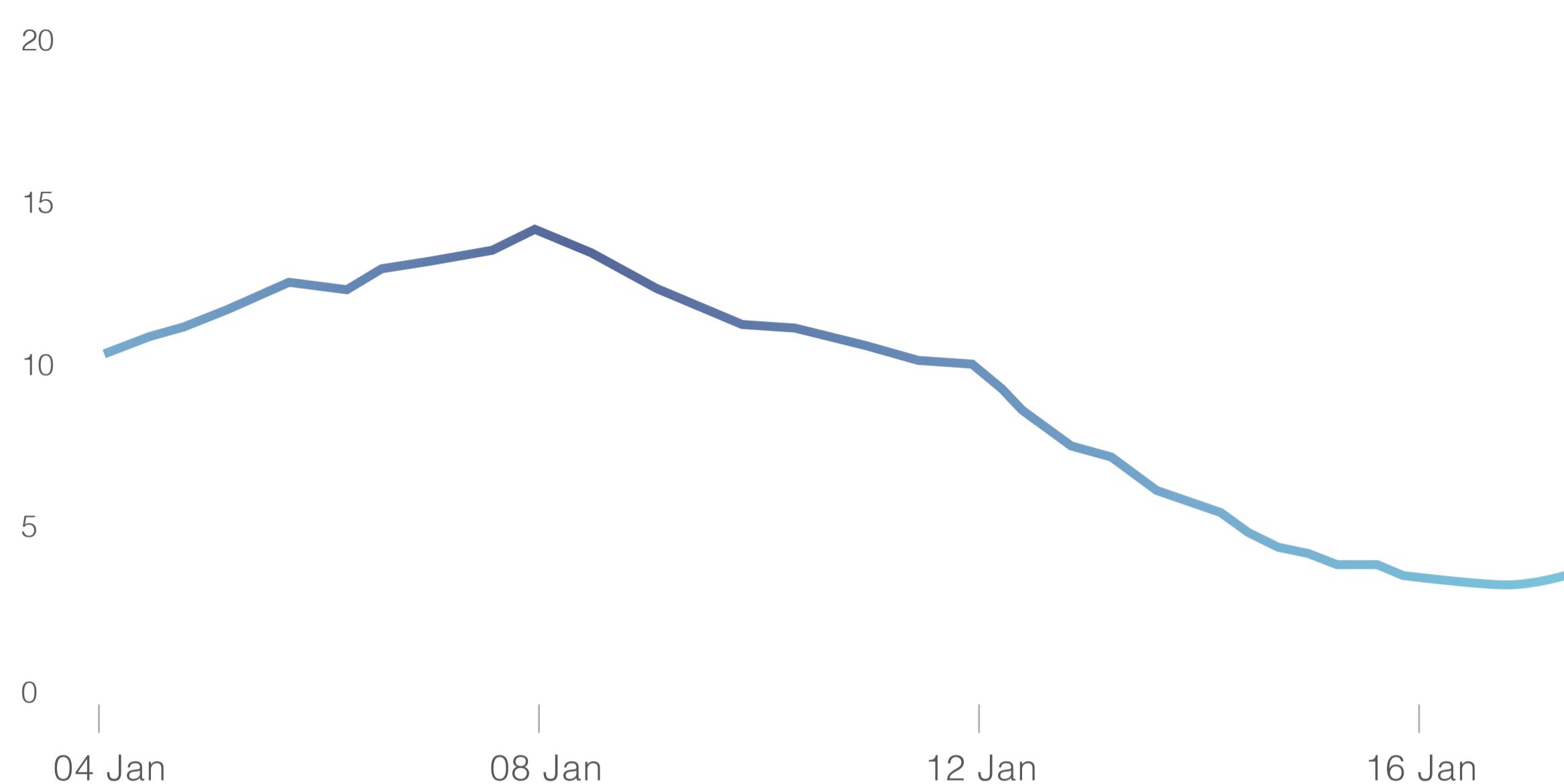
 Rainfall

 Temperature

 Sensors

[+ Add sensor](#)
[↑ Upload data](#)
[↓ Download .csv](#)

Rainfall in mm in [Huamantanga](#) from [Rain Sensor 1](#)

[Change location](#)

 GRAPH

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[Mar 2015 ▾](#)


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 Maps

 Riverflow

 Rainfall

 Temperature

 Sensors

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[↓ Download .csv](#)

Rainfall in mm in [Huamantanga](#) from [Rain Sensor 1](#)

[Change location](#)

 Show earlier

 Show later

Date	Reading (mm)
04 Mar 2014	20
05 Mar 2014	10
06 Mar 2014	05
07 Mar 2014	0
08 Mar 2014	10
09 Mar 2014	0
10 Mar 2014	0
11 Mar 2014	10

 GRAPH

 BAR CHART

 TABLE

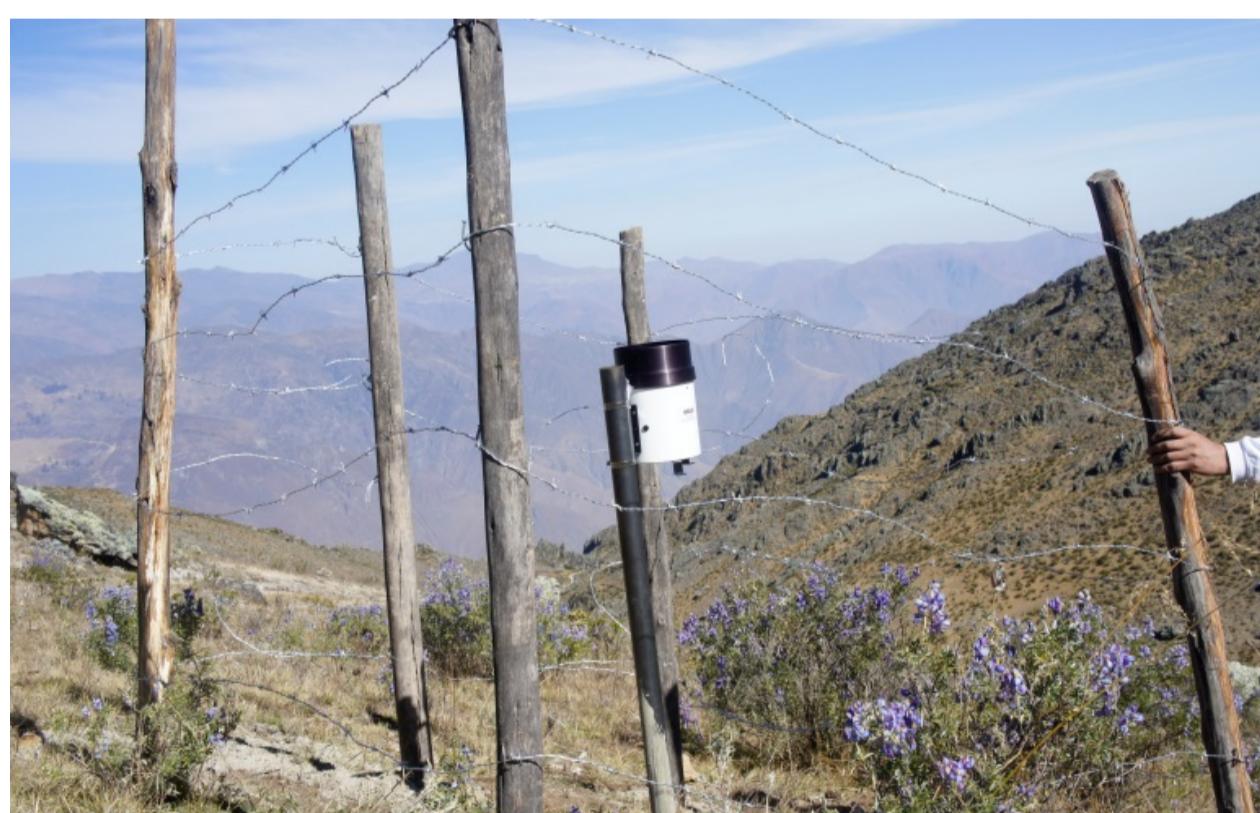
Date range

04 ▾ Mar ▾ 2014 ▾ ➤ 11 ▾ Mar ▾ 2014 ▾

Data resolution:

[Daily](#)
[Weekly](#)
[Monthly](#)
[Yearly](#)

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 Maps

 Riverflow

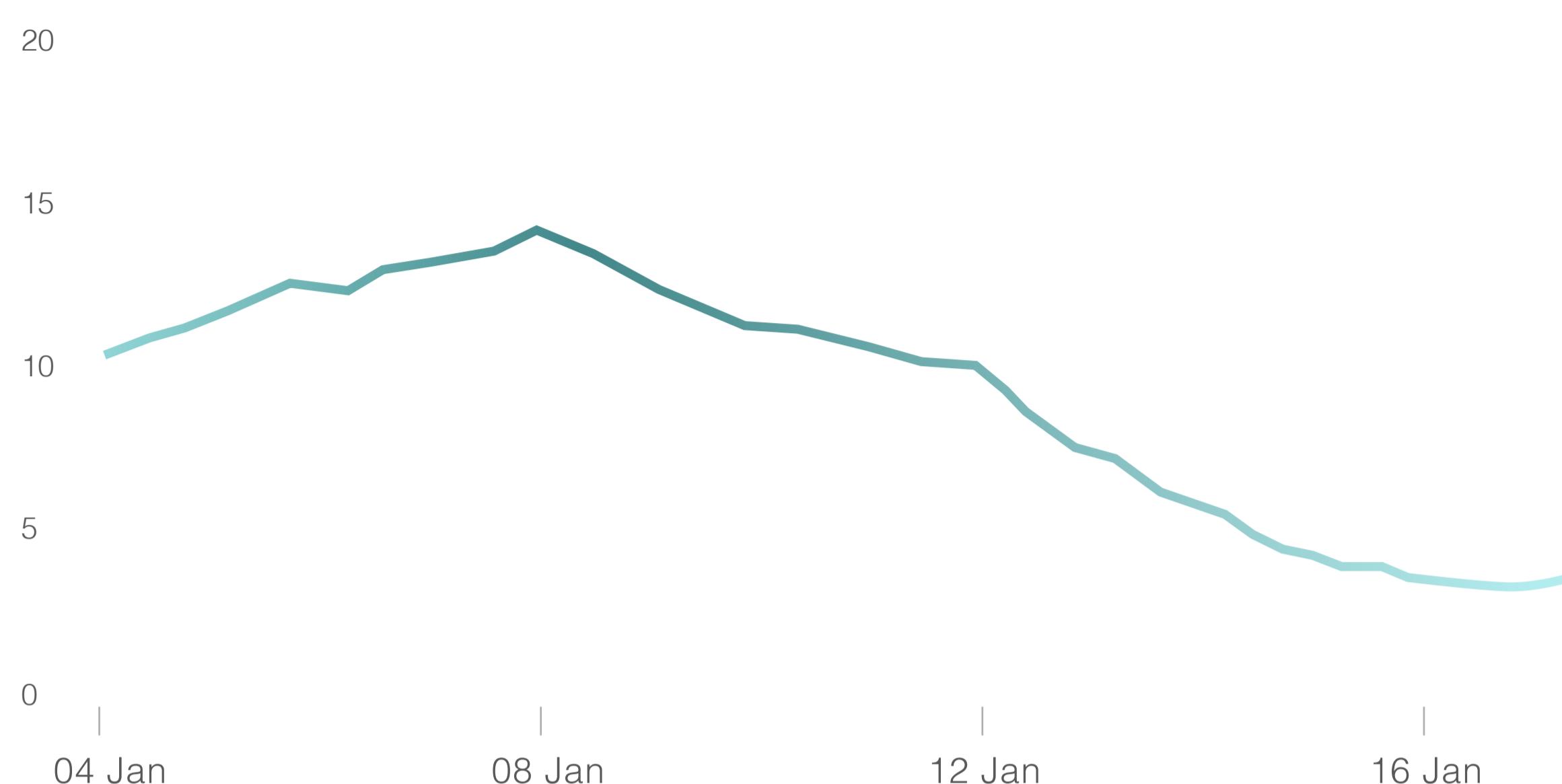
 Rainfall

 Temperature

 Sensors

[+ Add sensor](#)
[↑ Upload data](#)
[↓ Download .csv](#)

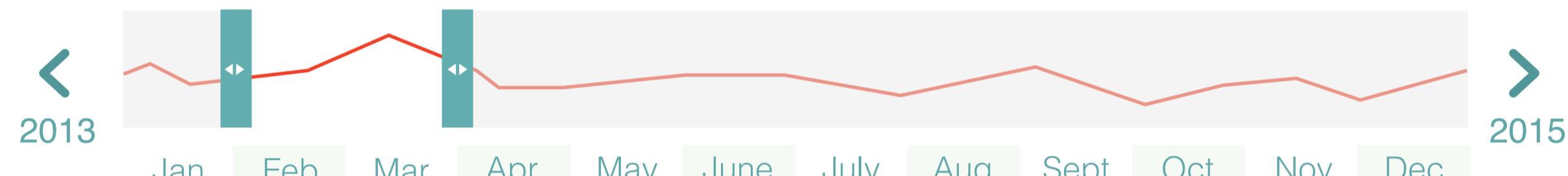
Riverflow in m³/s in Huamantanga from River [Name] Sensor 1

[Change location](#)

 GRAPH

 BAR CHART

 TABLE

Date range

[Feb 2015 ▾](#)
[Mar 2015 ▾](#)


Data resolution:

[Daily](#)
[Weekly](#)
[Monthly](#)
[Yearly](#)

How is this data collected?



Title of explanation

This chart shows the discharge - volume of water passing the sensor per unit time.

[Read more link](#)
[Find out about all the types of weather sensor used in these areas](#)

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 Maps

 Riverflow

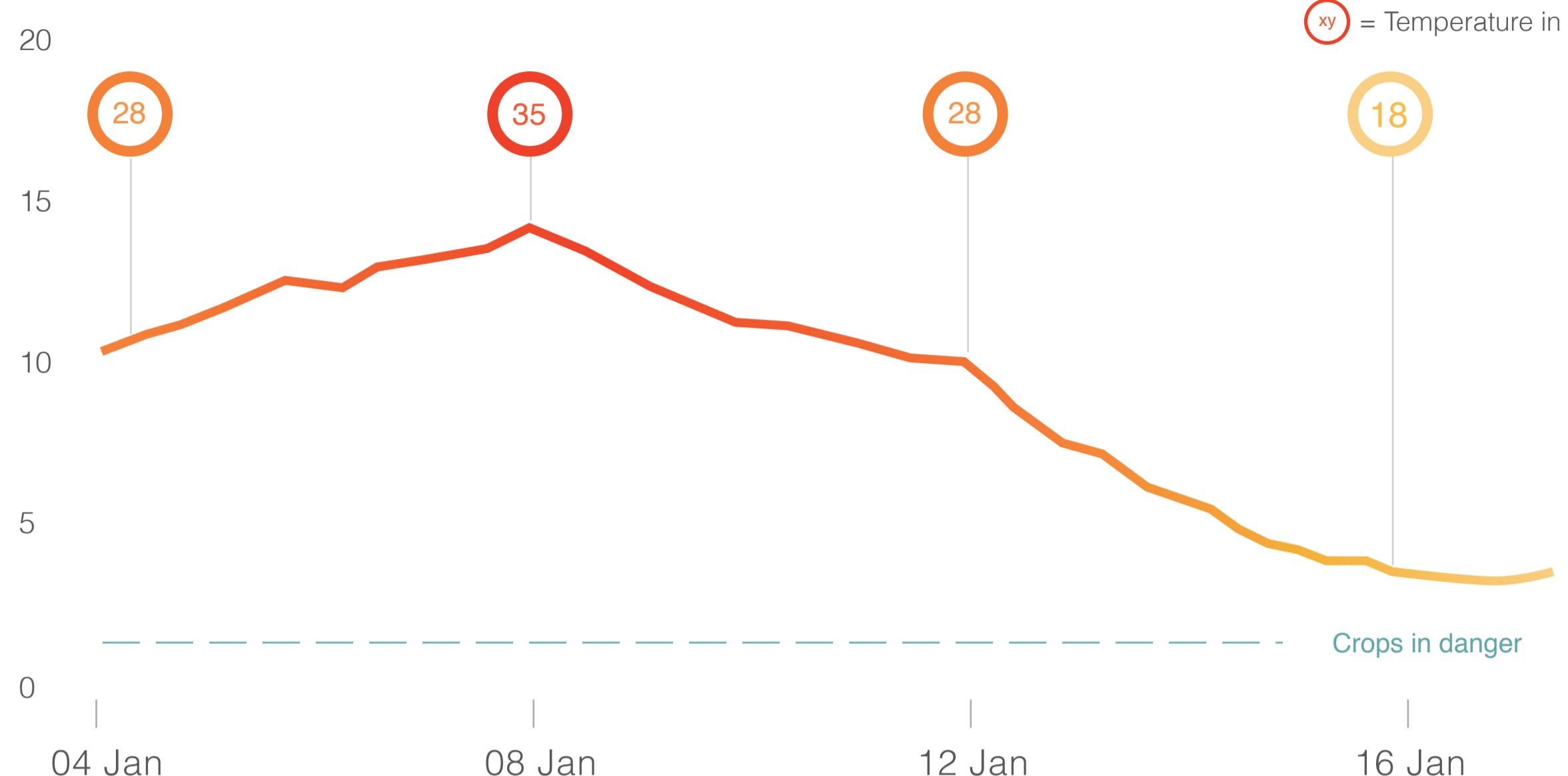
 Rainfall

 Temperature

 Sensors

[+ Add sensor](#)
[↑ Upload data](#)
[Download .csv](#)

Temperature in C in Huamantanga from Rain Sensor 1

[Change location](#)
 = Temperature in C

 GRAPH

 BAR CHART

 TABLE

Date range

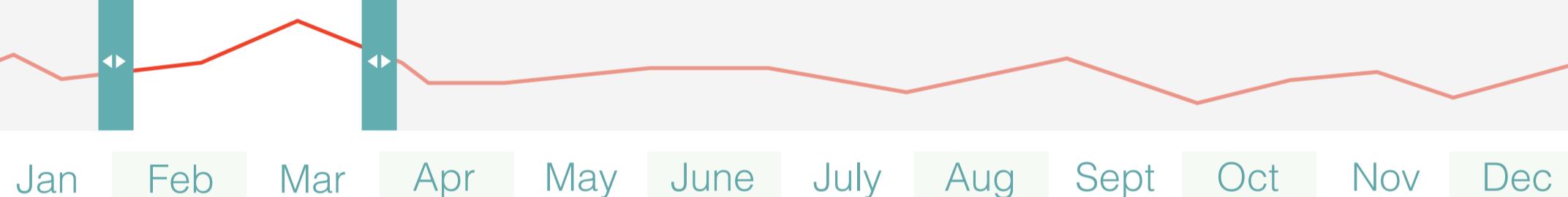
 Day

 Night

 Feb 2015 ▾

 Mar 2015 ▾

 2014



Data resolution:

 Daily

 Weekly

 Monthly

 Yearly

How is this data collected?



Title of explanation

This chart shows temperature in the catchment area. If night time temperatures go below a certain threshold, they may be dangerous for growing crops.

[Read more link](#)
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Use these graphs and maps to explore data collected by local environmental sensors. **Select a sensor location** to get started.

 Maps

 Riverflow

 Rainfall

 Temperature

 Sensors

 Tracing

[+ Add sensor](#)
[↑ Upload data](#)

Satellite map of [Huamantanga](#)

[Change location](#)

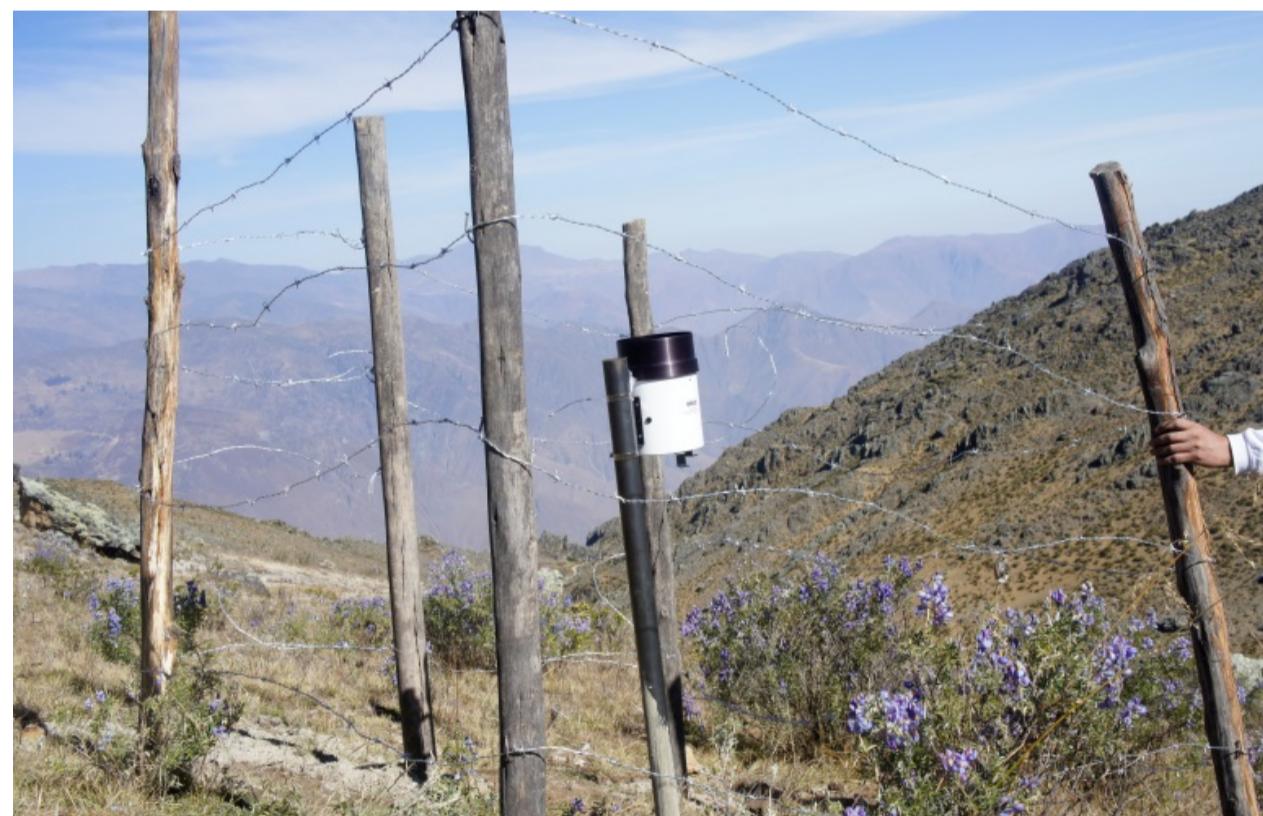

SATELLITE

SOIL TYPE

LAND COVER

CATTLE

How is this data collected?



Title of explanation

This is a 3D map of Huamantanga from Google Earth. It is produced by the superimposition of images obtained from satellite imagery, aerial photography and geographic information system (GIS) onto a 3D globe.

Source: Map data 2015 Google

[Read more link](#)

Find out about all the [types](#) of weather sensor used in these areas

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Use these graphs and maps to explore data collected by local environmental sensors. [Select a sensor location](#) to get started.

 Maps

 Riverflow

 Rainfall

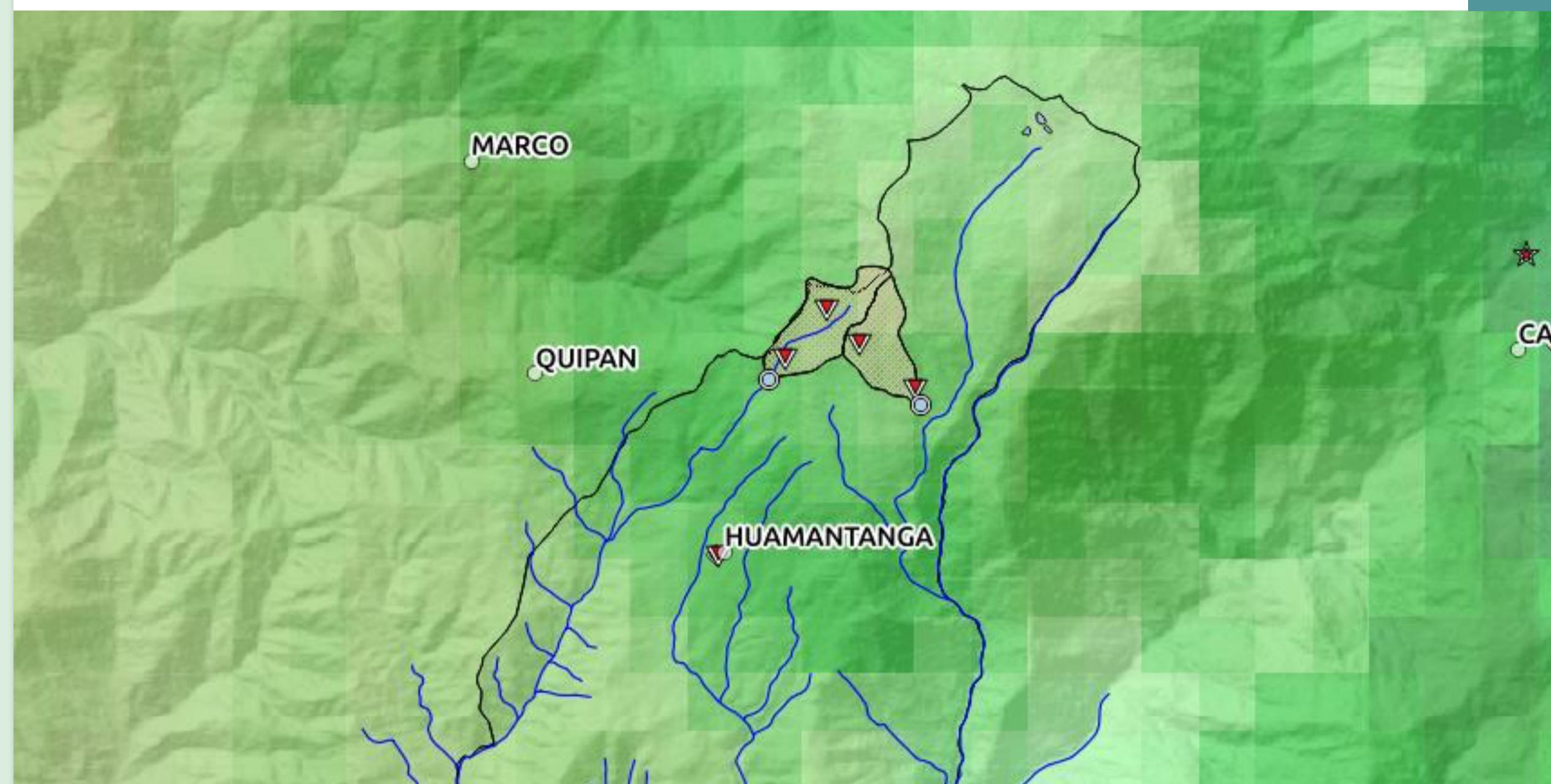
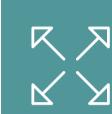
 Temperature

 Sensors

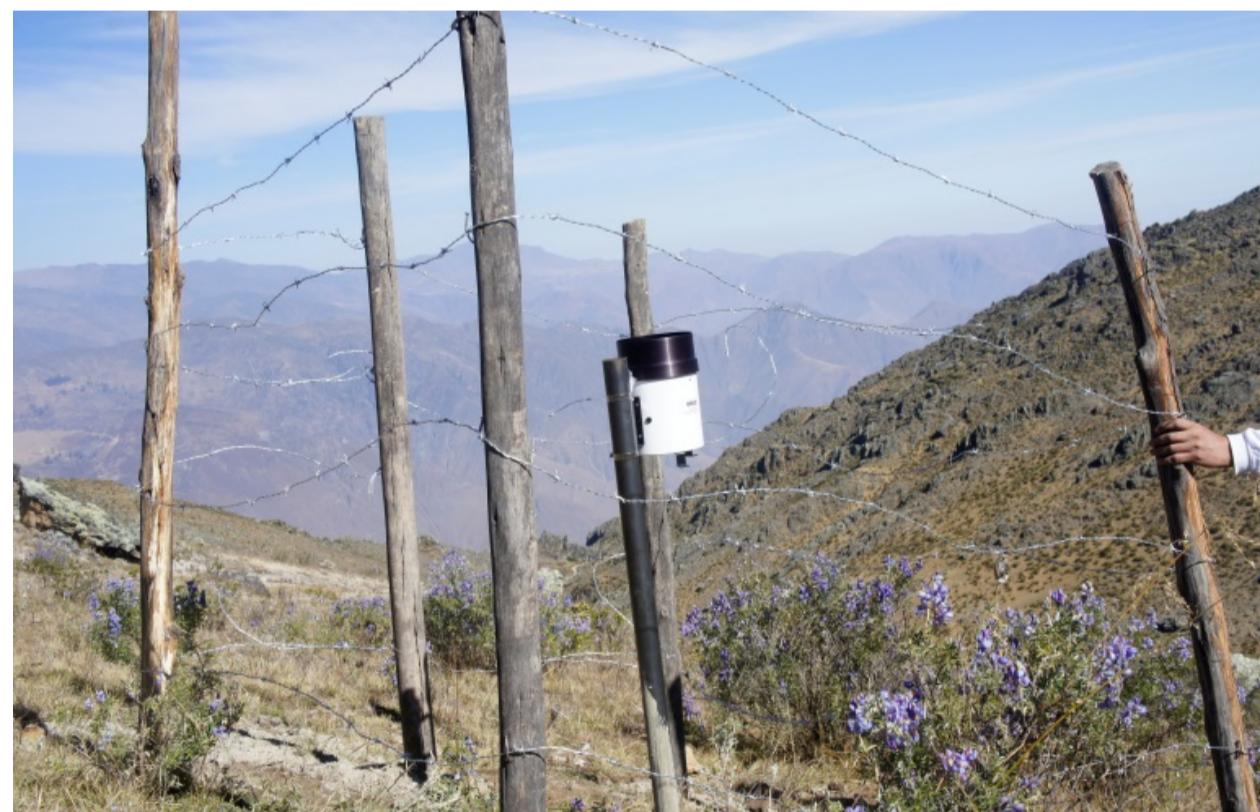
 Tracing

[+ Add sensor](#)
[↑ Upload data](#)

Vegetation greenness map of Huamantanga

[Change location](#)


How is this data collected?



Title of explanation

This is a 3D map of Huamantanga from Google Earth. It is produced by the superimposition of images obtained from satellite imagery, aerial photography and geographic information system (GIS) onto a 3D globe.

Source: Map data 2015 Google

[Read more link](#)

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OBSERVATORY
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Explore the different sensor types being used to collect data, and find out how they work

 Maps

 Riverflow

 Rainfall

 Temperature

Sensors

[+ Add sensor](#)
[↑ Upload data](#)

What are the sensors?

Short overview of what sensors are

[Explain](#)

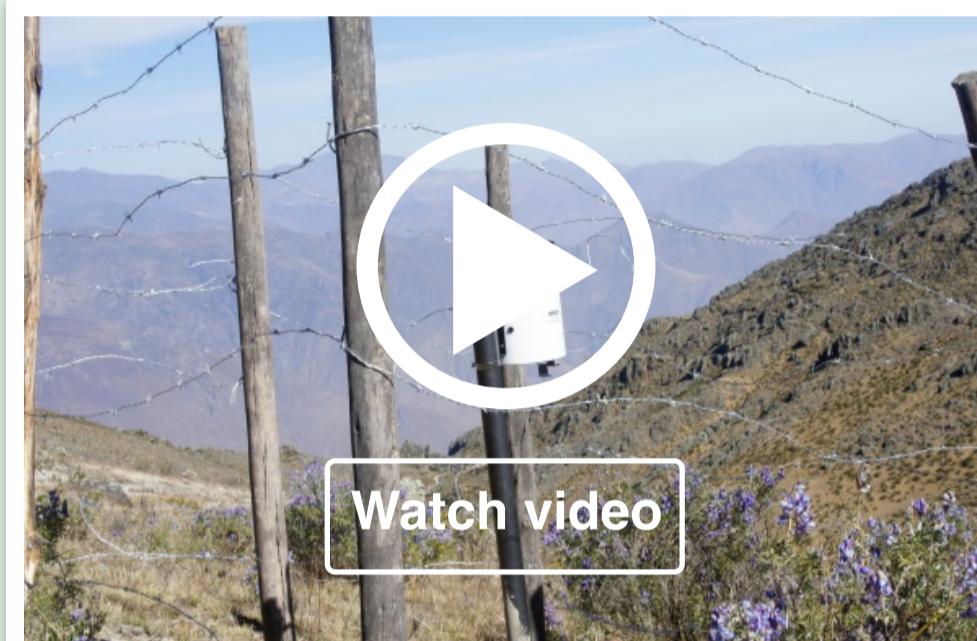
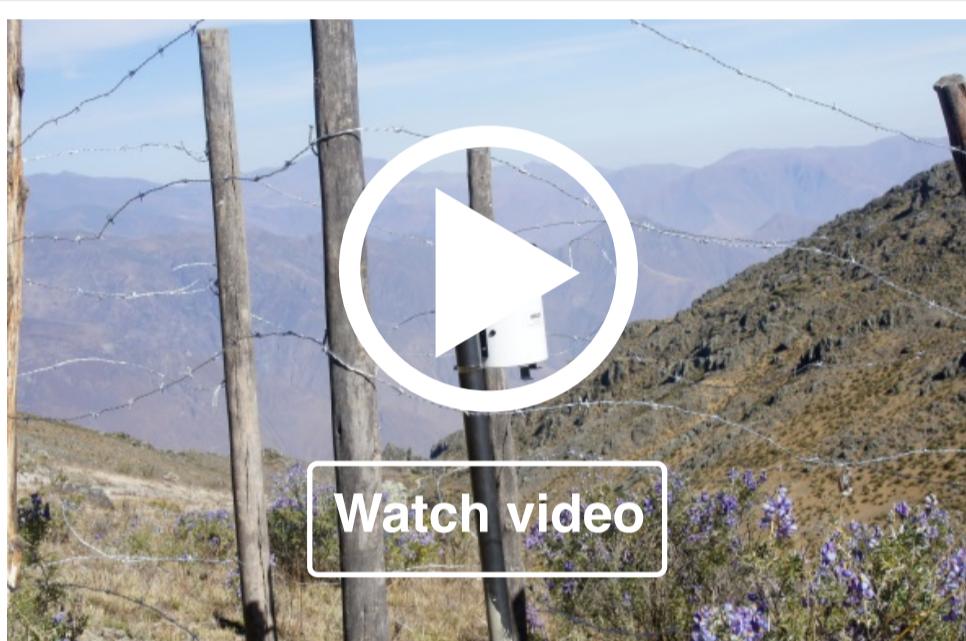
[Explain](#)

Where are they located?

The sensors installed for this project are mapped here

What types are being used?

There are 6 different types of sensor being used in the location, see more about how they each work

[Weighing gauge](#)
[Tip bucket](#)
[Acoustic rain](#)
[Graduated cylindor](#)
[Rain gauge](#)
[Buried Pit](#)


Weighing gauge

Describe 20px

Describe

Describe

Describe

Describe

Describe

Tip bucket

Describe 20px

Describe

Describe

Describe

Describe

Describe

Acoustic rain

Describe 20px

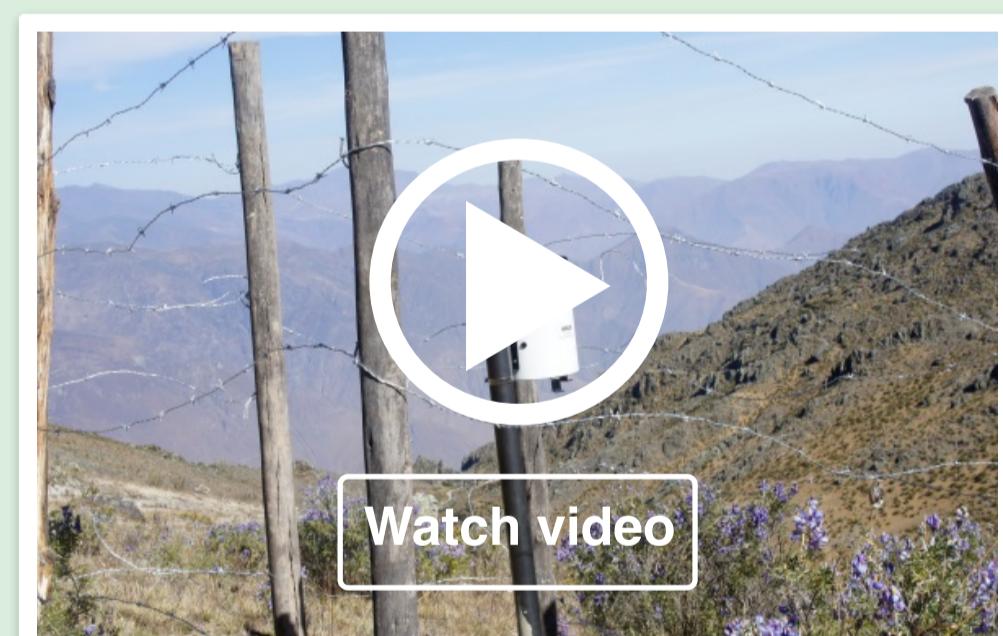
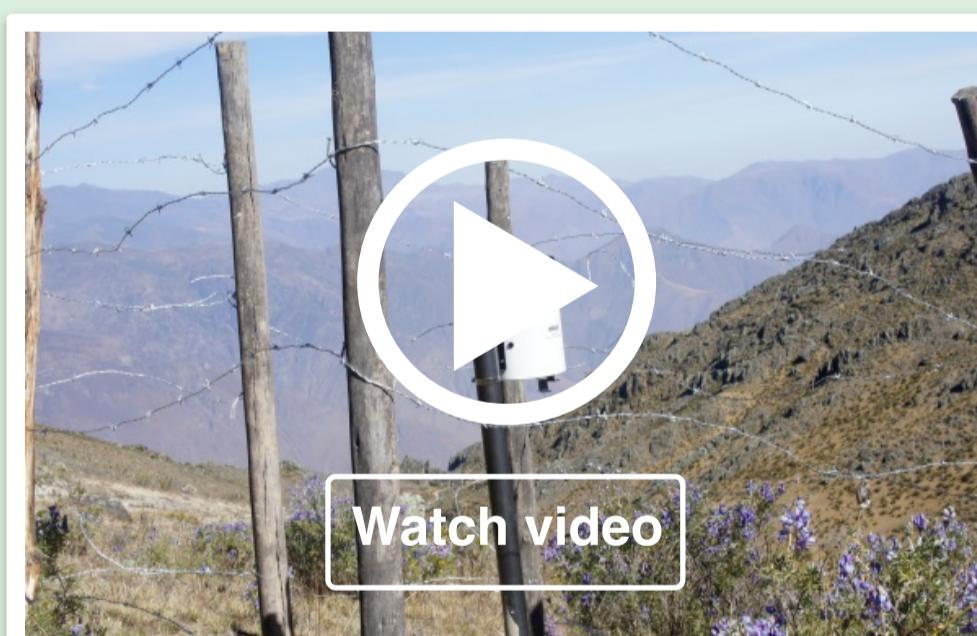
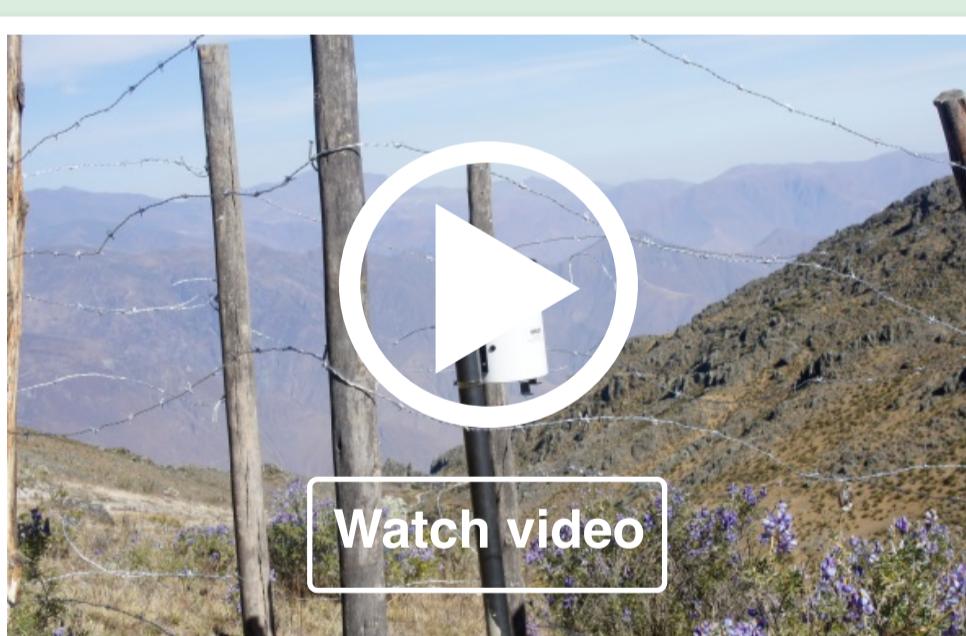
Describe

Describe

Describe

Describe

Describe



Graduated cylindor

Describe 20px

Describe

Describe

Describe

Describe

Describe

Rain gauge

Describe 20px

Describe

Describe

Describe

Describe

Describe

Buried pit

Describe 20px

Describe

Describe

Describe

Describe

Describe

Contact the MountainEvo team:
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OBSERVATORY
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[VIEW INDICATORS](#)

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[UPLOAD DATA](#)

ESS INDICATORS
[EXPLAINED](#)

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Connect your sensor to Mountain-Evo portal here by providing a name, sensor type, location and data type

 Maps Riverflow Rainfall Temperature Sensors Tracing[+ Add sensor](#)[↑ Upload data](#)

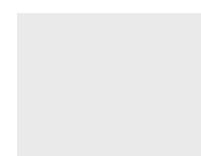
Add Sensor

NAME SENSOR
e.g. River [name] sensor

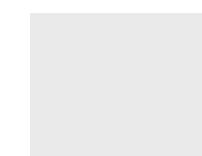
TYPE OF SENSOR

[Weighing gauge](#)[Acoustic rain](#)[Buried Pit](#)[Rain gauge](#)[Tip bucket](#)[Graduated cylindor](#)

SENSOR LOCATION



°N



°W

[Choose on map](#)

UNITS

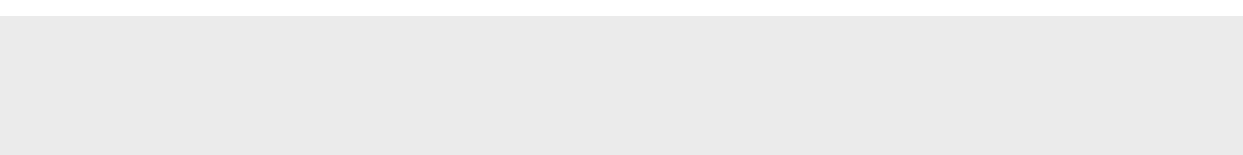
[mm](#)[inch](#)

OBSERVED PROPERTY

[Observation ▾](#)

SENSOR ADMIN EMAIL

Who will be uploading data?

[Submit](#)

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Upload data for a sensor on the Mountain-Evo platform.

 Maps Riverflow Rainfall Temperature Sensors Tracing[+ Add sensor](#)[↑ Upload data](#)

Upload data

LOCATION

Huamantanga 

SENSOR

Rain Sensor 1 — or — [Choose on map](#)

DATE RECORDED

04 Mar 2014 

READING

mm

— or — [Upload .csv file](#)

YOUR NAME

This will be sent to the
sensor admin to verify
the data readings

YOUR EMAIL

If the sensor admin has
a question, they will
contact you

[Submit](#)

Contact the MountainEvo team:
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[english !\[\]\(1b93403d5d9a230b6b637d4d56151354_img.jpg\)](#)[Peruvian Andes !\[\]\(9ffd9c08c28b113b1b6cd1c2f64db17c_img.jpg\)](#)

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Use Ecosystem Services indicators to gauge characteristics of a catchment. [Read more about the indicators](#), or [select a location to start](#).

What are Ecosystem Services?

A brief description of what they are summing up the key points and why they are relevant and helpful to policy makers

[Read more](#)

Interpreting the scores

Runoff ratio: **0 (low)** to **1 (high)**

Slope of flow duration curve make this scores meaningful

Base flow index: **0 (low)** to **1 (high)**

[ESS indicators explained](#)

Start

View ESS indicators

Choose a location, date range and/or conservation and the ESS indicator scores will appear here



Compare indicators

Select to compare to another location, date range and/or conservation type, and view ESS indicator scores here

Ecosystem Services in more depth

Title of explanation

Explain what sensors are used, how data is collected etc

Explain

Explain.

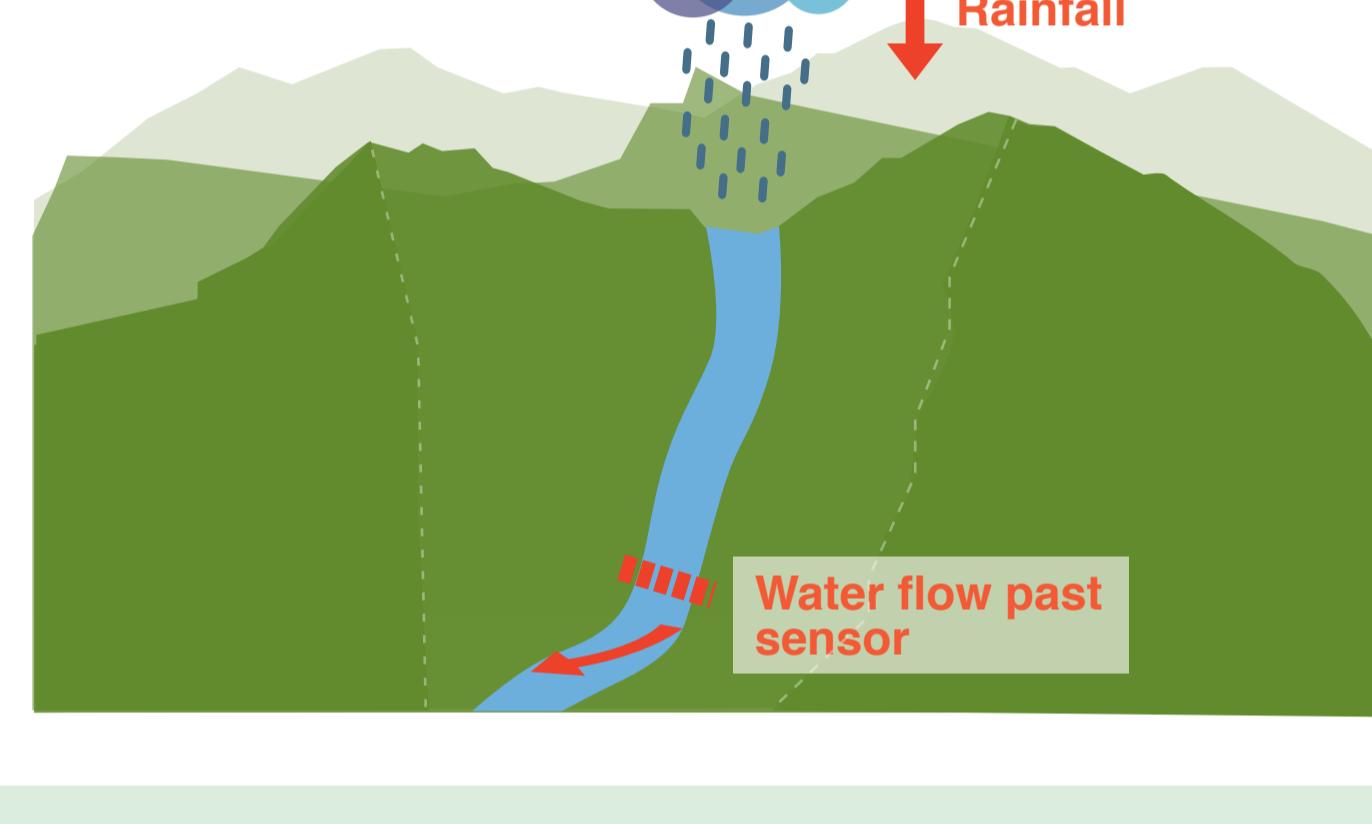
Three indicators for Ecosystem services are explained below: [Runoff ratio](#), [Slope of flow duration curve](#), [Base flow index](#)

Ecosystem Services Indicators explained

Runoff ratio

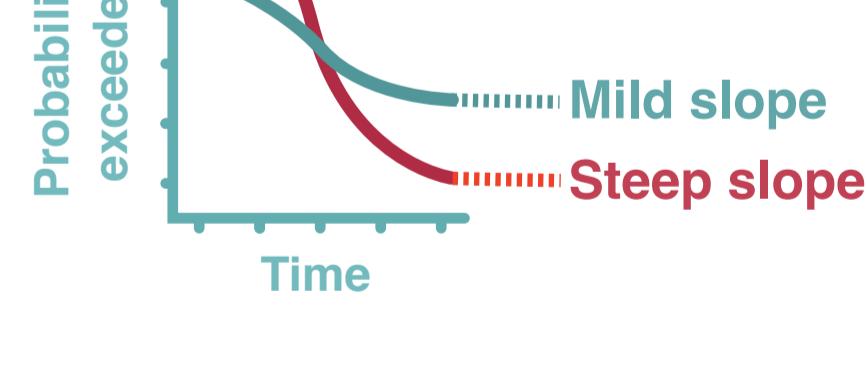
Runoff ratio is the ratio of long-term average riverflow to the long-term average precipitation. It represents the long term water balance separation between water being released from the watershed through the river and that returned to the atmosphere via evapotranspiration.

The runoff ratio is a property influenced by climate and soil conditions.



Slope of flow duration curve

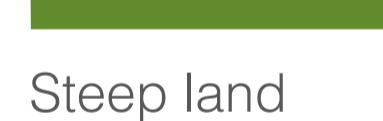
The flow duration curve (FDC) is the distribution of probabilities of daily riverflow being greater to or equal to a specified magnitude. The slope of the curve on between the 33rd and 66th percentiles of the riverflow is relatively linear, and characterizes the riverflow variability.



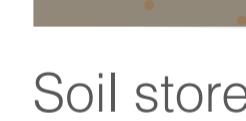
Steep slope causes



Straight



Steep land



Soil stores less



No diversions

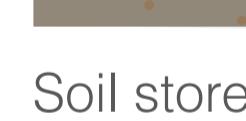
Mild slope causes



Meandering



Flatter land



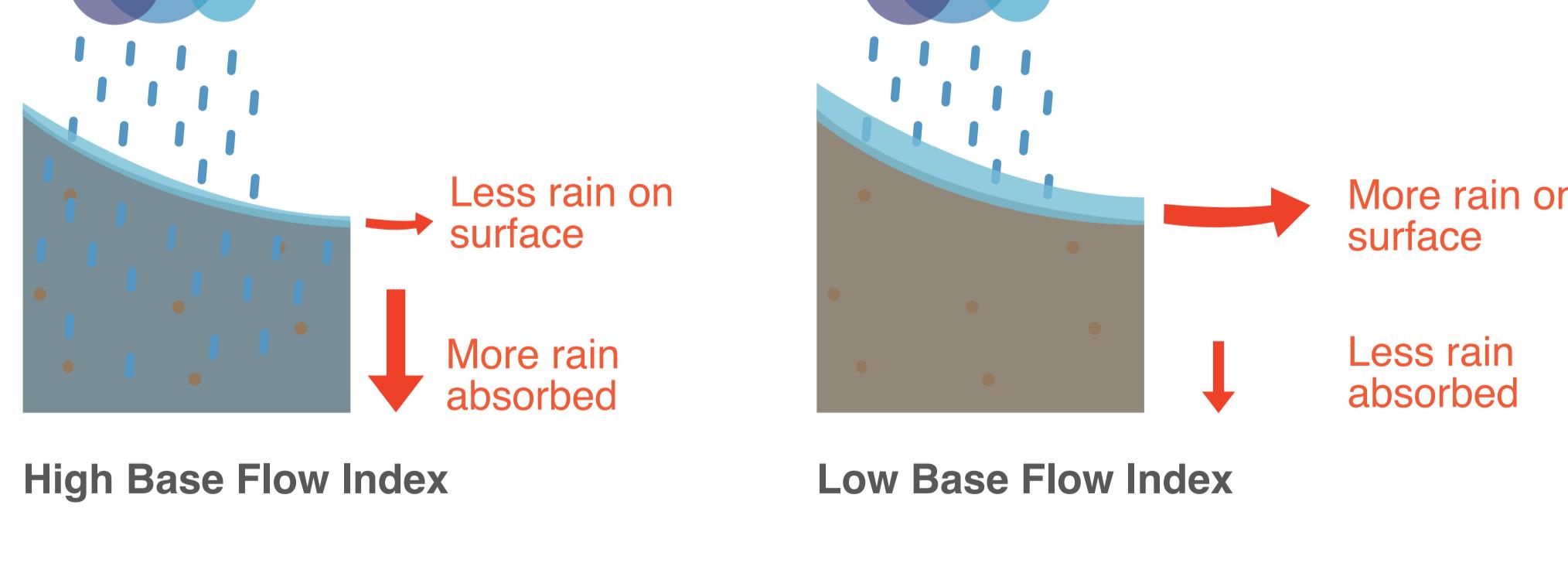
Soil stores more



Diversions e.g. mamenteo

Base flow index

Base flow index (BFI) is the ratio of long term base flow to total streamflow. A high value means that there is a higher base flow contribution, such that more water is using long and slow flow paths through the watershed. Low values indicate a small amount of base flow between storm events, and thus a high contribution of storm events to the streamflow during or just after a storm event. The BFI is a property of the regulation capacity of the soil that either enhances or impedes infiltration.



Use Ecosystem Services indicators to gauge characteristics of a catchment. [Read more about the indicators](#), or [select a location to start](#).

Select a location

Choose a location to view a summary of Ecosystem Services indicators

Peru

[Huamantanga](#)

A brief description of what makes this case study interesting/relevant

[Animal exclusion](#) | [Mamanteo](#)

[Lloa](#)

A brief description of what makes this case study interesting/relevant

[Irrigation](#)

[Jatanhuaycu](#)

A brief description of what makes this case study interesting/relevant

[Irrigation](#) | [Mamanteo](#)

[Paute](#)

A brief description of what makes this case study interesting/relevant

[Animal exclusion](#)

Ecuador

[Huaraz](#)

A brief description of what makes this case study interesting/relevant

[Mamanteo](#)

[Tembobamba](#)

A brief description of what makes this case study interesting/relevant

[Irrigation](#) | [Mamanteo](#)

Country

[Region](#)

A brief description of what makes this case study interesting/relevant

[Reforestation](#)

Explain what sensors are used, how data is collected etc

Explain

Explain.

Three indicators for Ecosystem services are explained below: [Runoff ratio](#),
[Slope of flow duration curve](#), [Base flow index](#)

Use Ecosystem Services indicators to gauge characteristics of a catchment. [Read more about the indicators](#), or [select a location to start](#).

Select a location

Choose a location to view a summary of Ecosystem Services indicators

[Location](#)[Conservation type](#)**Animal exclusion ✓****Irrigation****Mamanteo ✓****Reforestation ✓**

Huamantanga

A brief description of what makes this case study interesting/relevant

[Animal exclusion](#) | [Mamanteo](#)

Paute

A brief description of what makes this case study interesting/relevant

[Animal exclusion](#)

Jatantuaycu

A brief description of what makes this case study interesting/relevant

[Irrigation](#) | [Mamanteo](#)

Huaraz

A brief description of what makes this case study interesting/relevant

[Mamanteo](#)

Tembobamba

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[Irrigation](#) | [Mamanteo](#)

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Huamantanga

A brief description of what makes this case study interesting/relevant

[All locations](#)

1 Animal exclusion

Very short description

Dates implemented: May 2015

2 Mamanteo

Very short description

Dates implemented: June 2014

3 Control area

Very short description

Dates implemented: April 2012



Explain what sensors are used, how data is collected etc

Explain

Explain.

Three indicators for Ecosystem services are explained below: [Runoff ratio](#), [Slope of flow duration curve](#), [Base flow index](#)

Use Ecosystem Services indicators to gauge characteristics of a catchment. [Read more about the indicators](#), or [select a location to start](#).



Huamantanga

A brief description of what makes this case study interesting/relevant

[All locations](#)

Select a catchment

Choose a catchment to view the ESS indicators for this area

1 Animal exclusion

Very short description

Dates implemented: May 2015

Expanded information and description of the conservation measures in the area..

More description

More

More More

More

[Back](#)[Show ESS indicators](#)

Explain what sensors are used, how data is collected etc

Explain

Explain.

Three indicators for Ecosystem services are explained below: [Runoff ratio](#), [Slope of flow duration curve](#), [Base flow index](#)

Use Ecosystem Services indicators to gauge characteristics of a catchment. [Read more about the indicators](#), or [select a location to start](#).



Huamantanga

A brief description of what makes this case study interesting/relevant

[Back to catchments](#)

More about the place and why this project is running

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Explain what sensors are used, how data is collected etc

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What are Ecosystem Services?
A brief description of what they are summing up the key points and why they are relevant and helpful to policy makers

[Read more](#)

Interpreting the scores
Runoff ratio: **0 (low)** to **1 (high)**

Slope of flow duration curve make this scores meaningful

Base flow index: **0 (low)** to **1 (high)**

[ESS indicators explained](#)

Huamantanga
Catchment 1
Animal exclusion | since Jan 2014

Select data range:
Jan 2014 ▾ ➤ Mar 2014 ▾

0.36	-3.00	0.64
Runoff ratio	Slope of flow duration curve	Base flow index

[More about the animal exclusion in Huamantanga project](#)



Compare indicators

Select to compare to another location, date range and/or conservation type, and view ESS indicator scores here

Ecosystem Services in more depth

Title of explanation

Explain what sensors are used, how data is collected etc

Explain

Explain.

Three indicators for Ecosystem services are explained below: [Runoff ratio](#), [Slope of flow duration curve](#), [Base flow index](#)

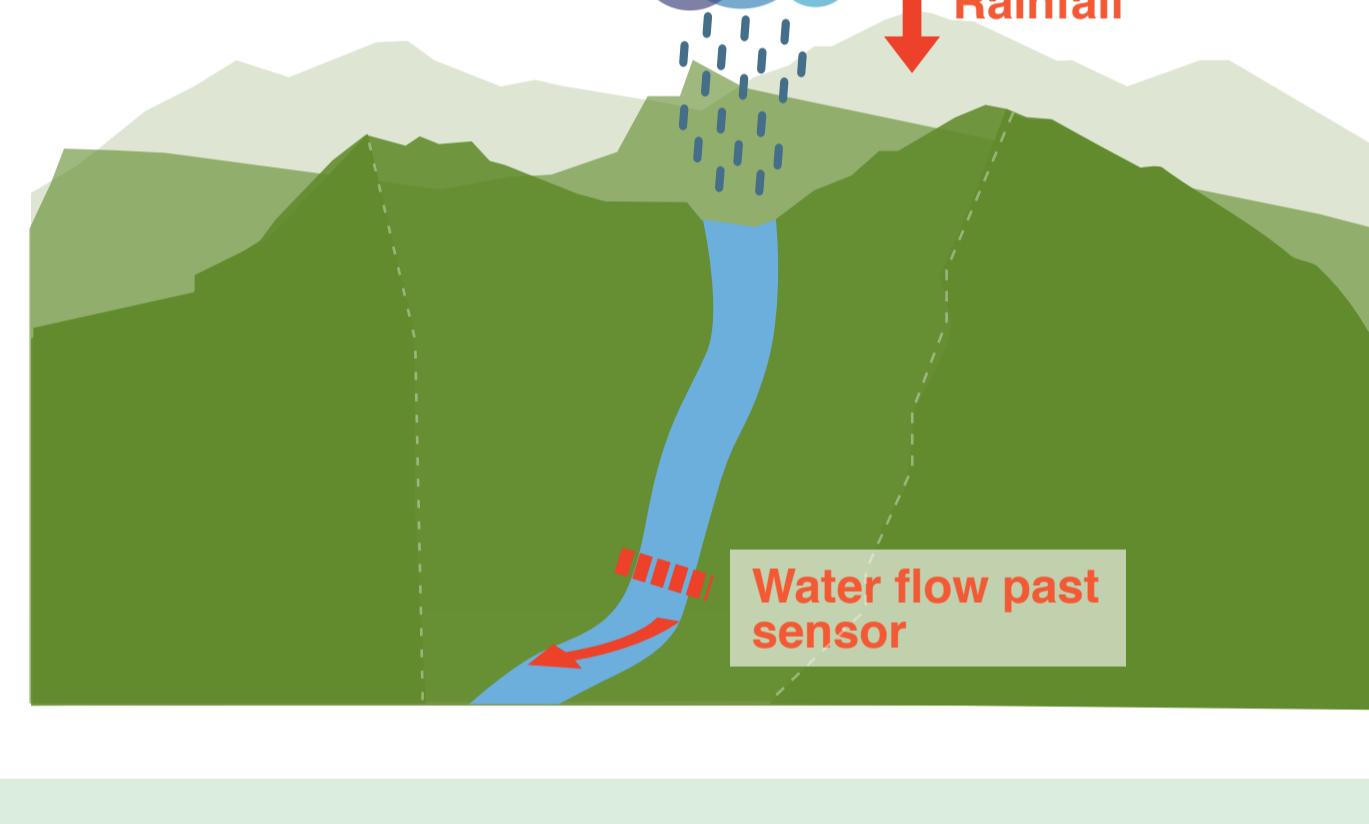
Ecosystem Services Indicators explained

Runoff ratio

Runoff ratio is the ratio of long-term average riverflow to the long-term average precipitation. It represents the long term water balance separation between water being released from the watershed through the river and that returned to the atmosphere via evapotranspiration.

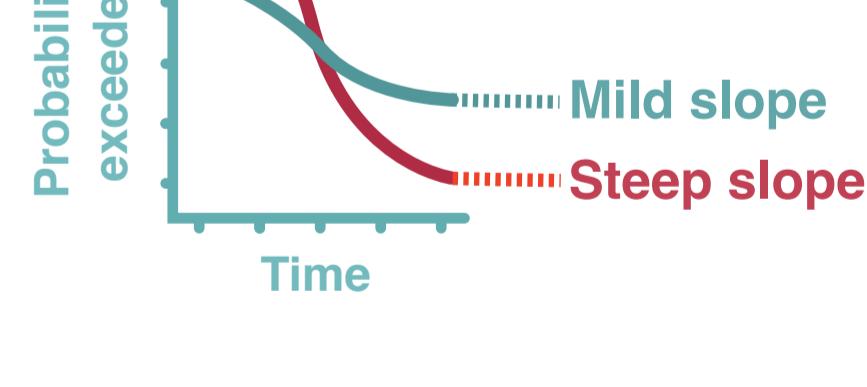
The runoff ratio is a property influenced by climate and soil conditions.

The score is

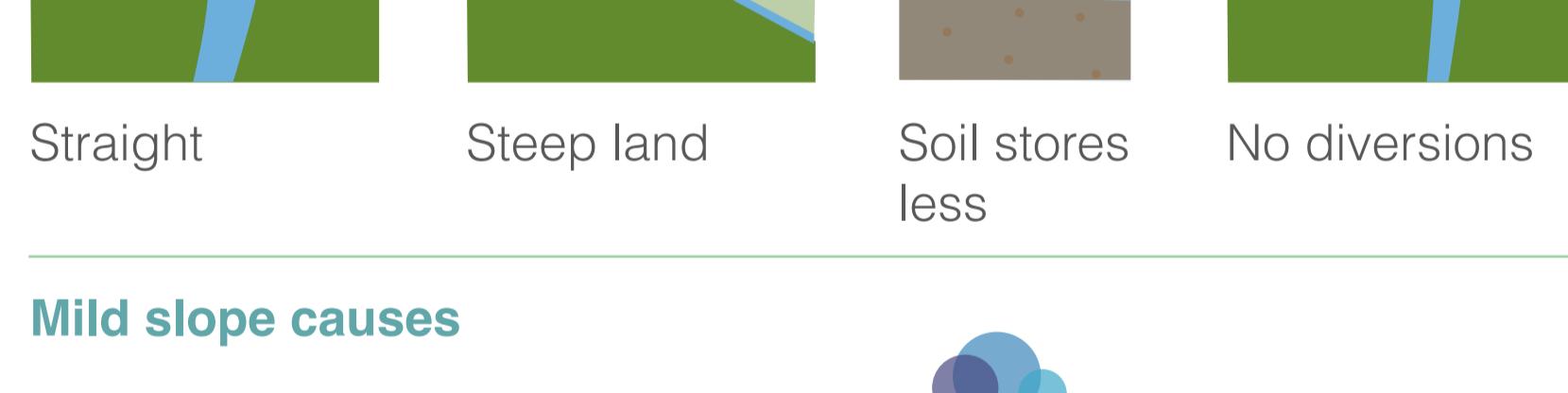


Slope of flow duration curve

The flow duration curve (FDC) is the distribution of probabilities of daily riverflow being greater to or equal to a specified magnitude. The slope of the curve on between the 33rd and 66th percentiles of the riverflow is relatively linear, and characterizes the riverflow variability.



Steep slope causes



Mild slope causes



Base flow index

Base flow index (BFI) is the ratio of long term base flow to total streamflow. A high value means that there is a higher base flow contribution, such that more water is using long and slow flow paths through the watershed. Low values indicate a small amount of base flow between storm events, and thus a high contribution of storm events to the streamflow during or just after a storm event. The BFI is a property of the regulation capacity of the soil that either enhances or impedes infiltration.

