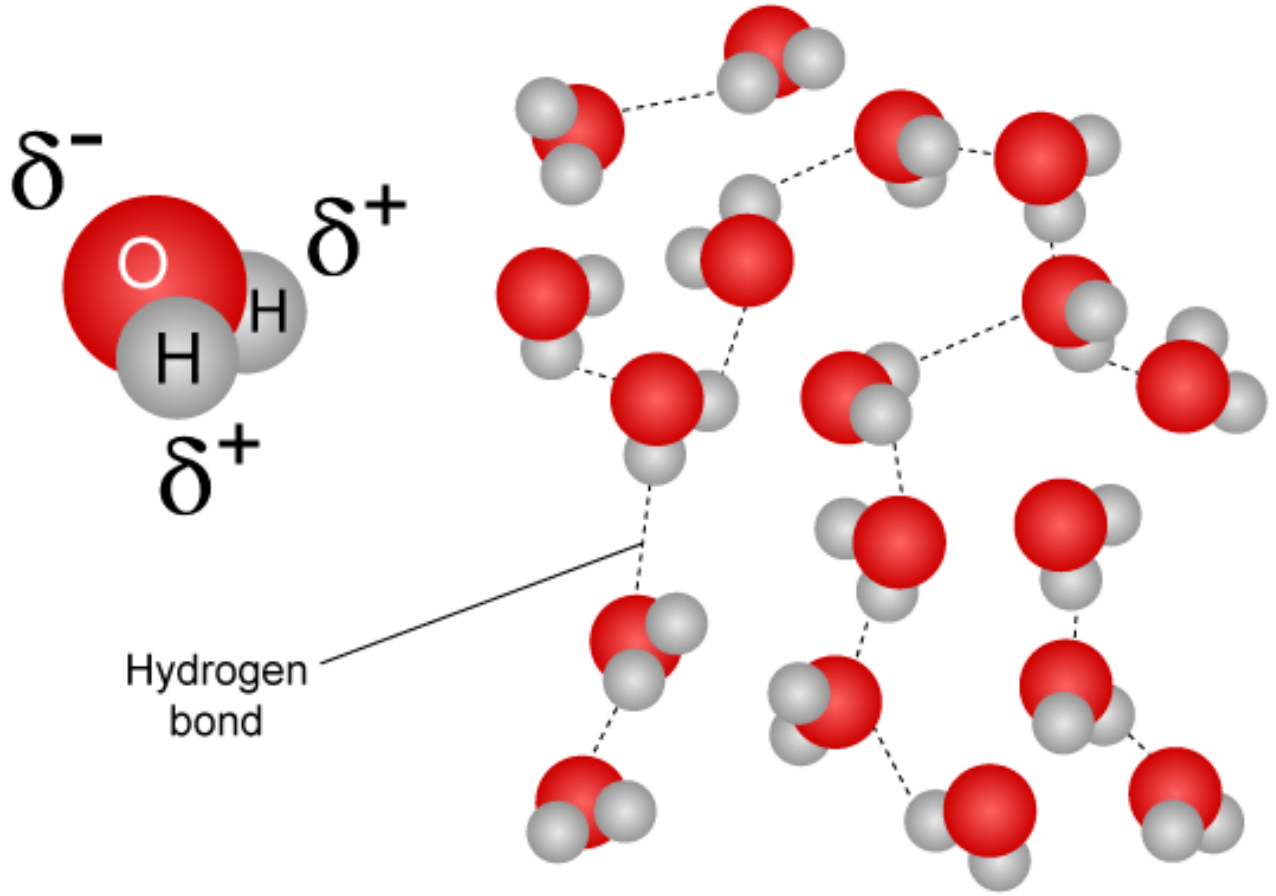
Tema 7. Xeodinámica externa II:
ACCIÓN XEOLÓXICA DAS AUGAS LÍQUIDAS SUPERFICIAIS

A HIDROSFERA

A AUGA



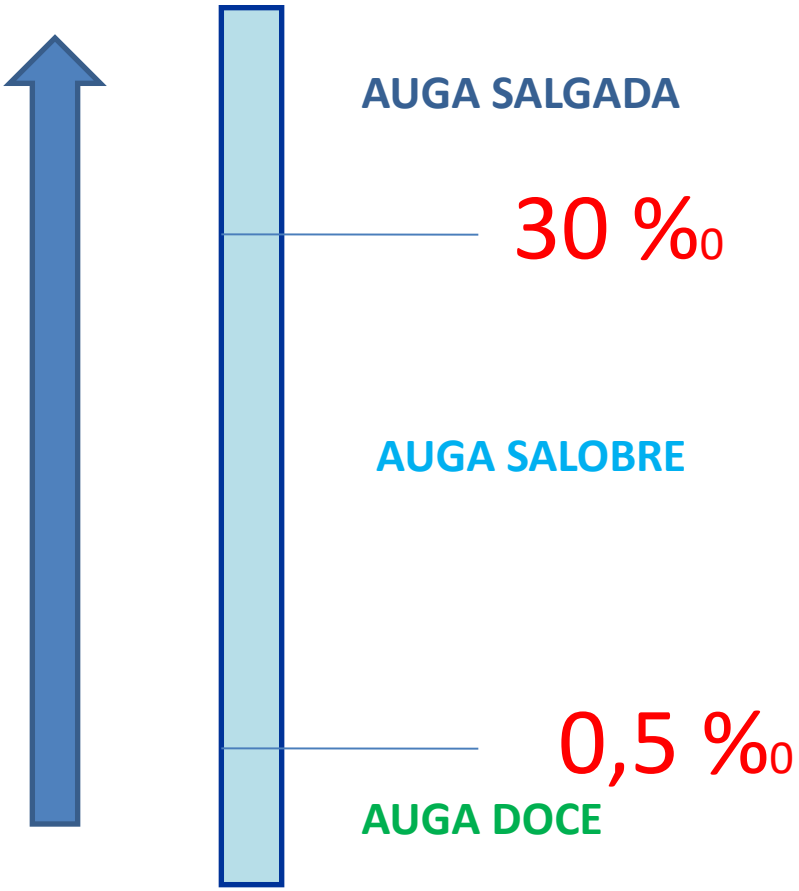
(length appears different for perspective (3D))

A AUGA NATURAL É UNHA MESTURA DE:

AUGA PURA
SÓLIDOS EN DISOLUCIÓN
SÓLIDOS EN SUSPENSIÓN
GASES EN DISOLUCIÓN

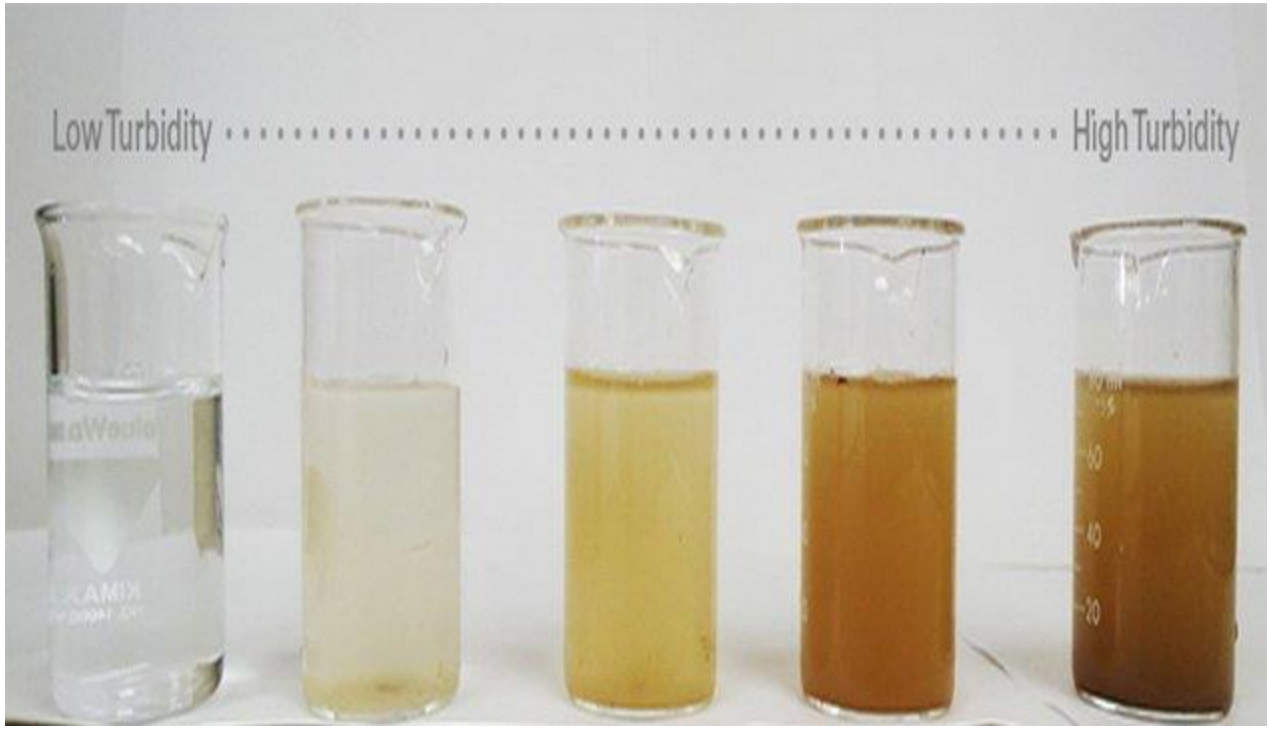
SÓLIDOS EN DISOLUCIÓN TOTALES

TDS - SALINIDADE



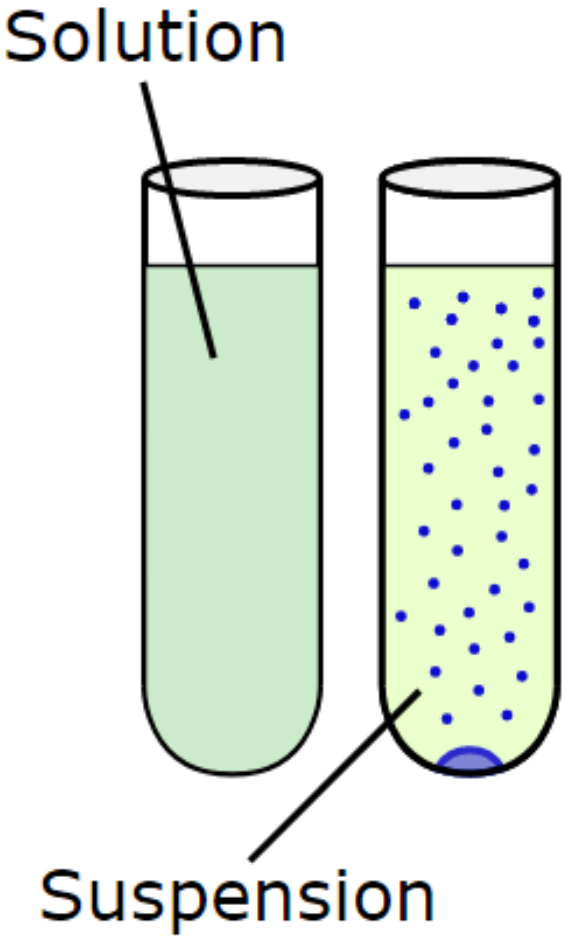
GRAMOS DE SAL POR LITRO DE AUGA

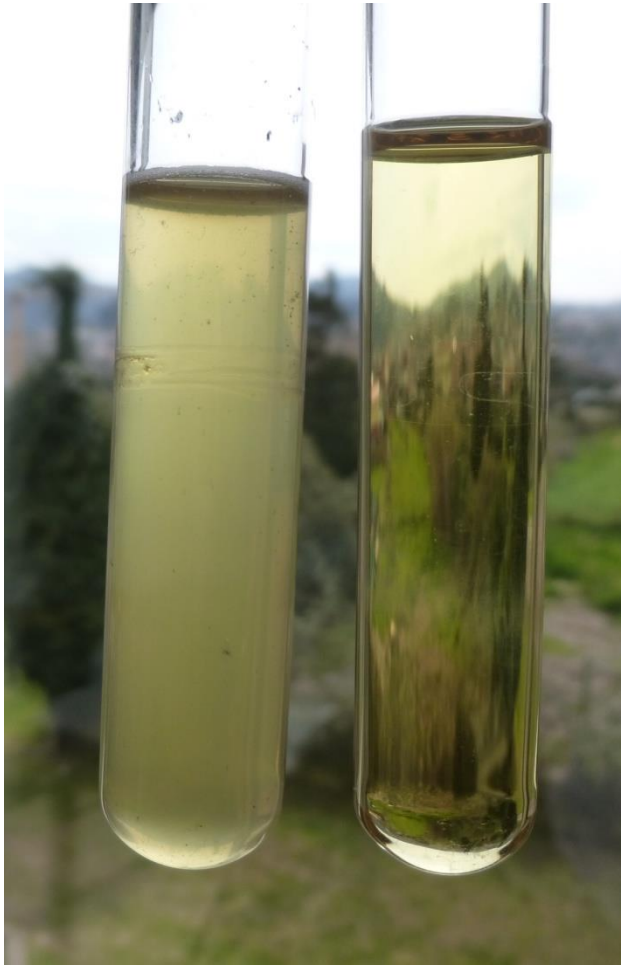
SÓLIDOS EN SUSPENSIÓN
TURBIDEZ



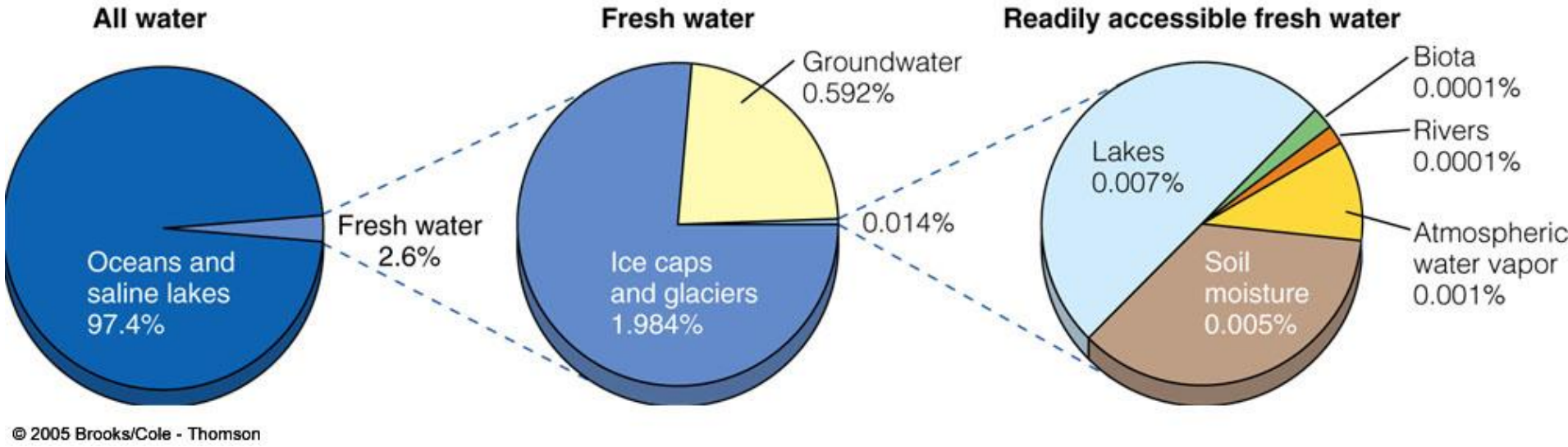
PARTÍCULAS FINAS: MATERIA ORGÁNICA, ARXILAS, MICROORGANISMOS

DISOLUCIÓN - SUSPENSIÓN

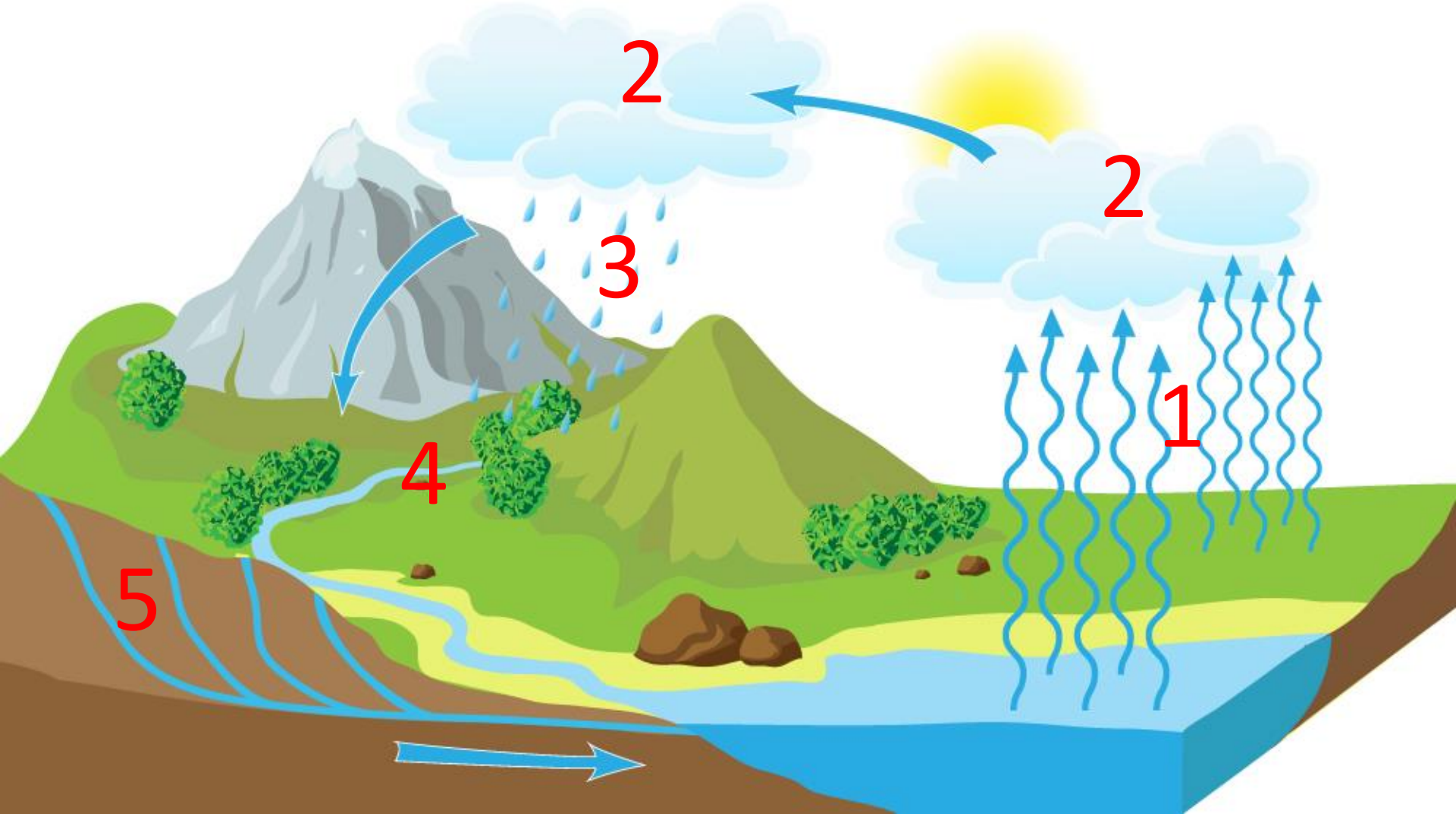




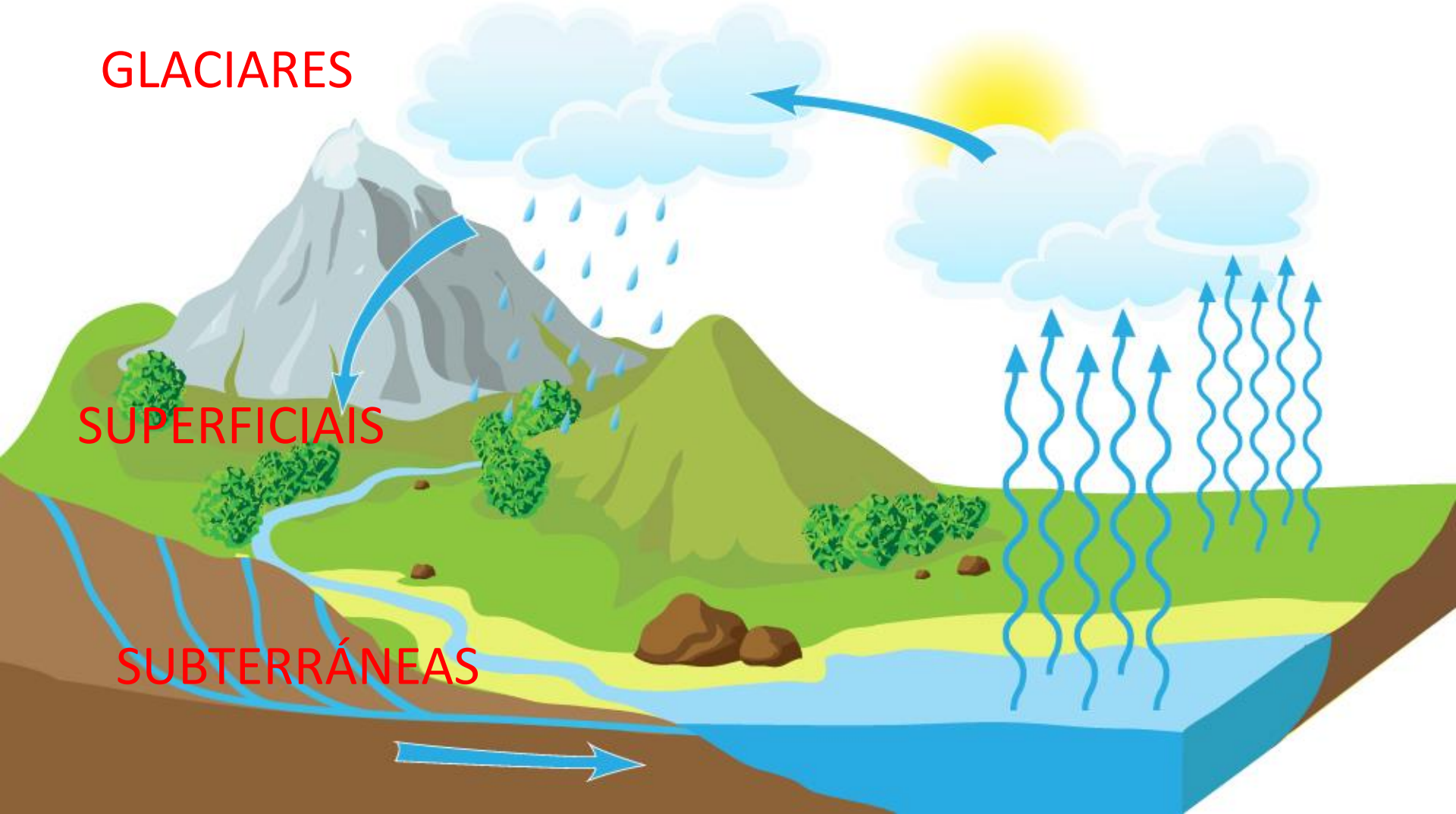
EQUILIBRIO DINÁMICO CANTIDADE CONSTANTE NOS DISTINTOS COMPARTIMENTOS



CICLO DA AUGA



AUGAS CONTINENTAIS



AS AUGAS LÍQUIDAS SUPERFICIAIS

CHOIVA

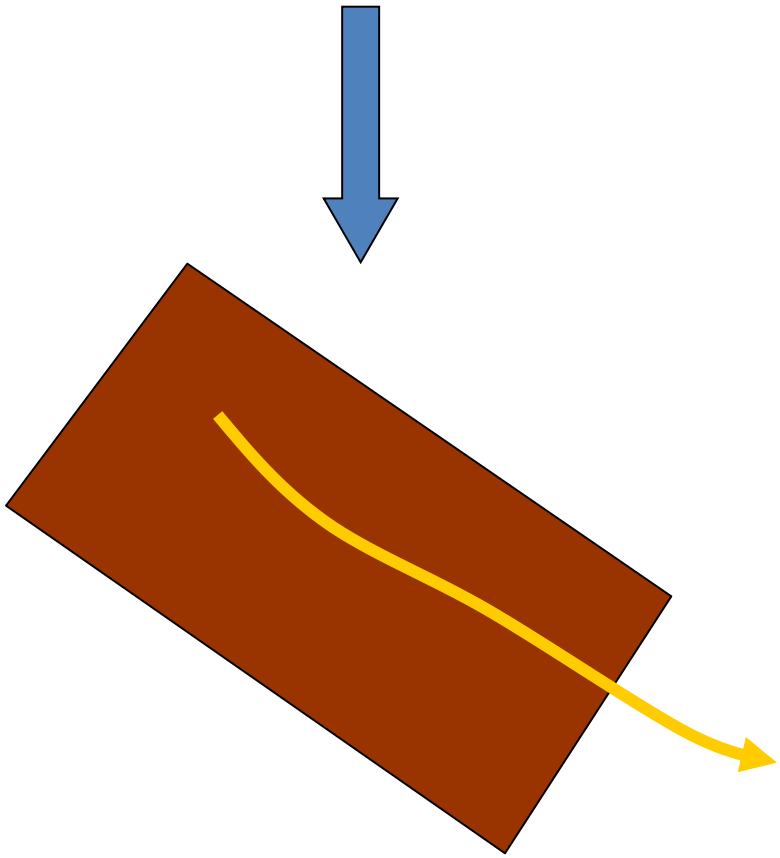
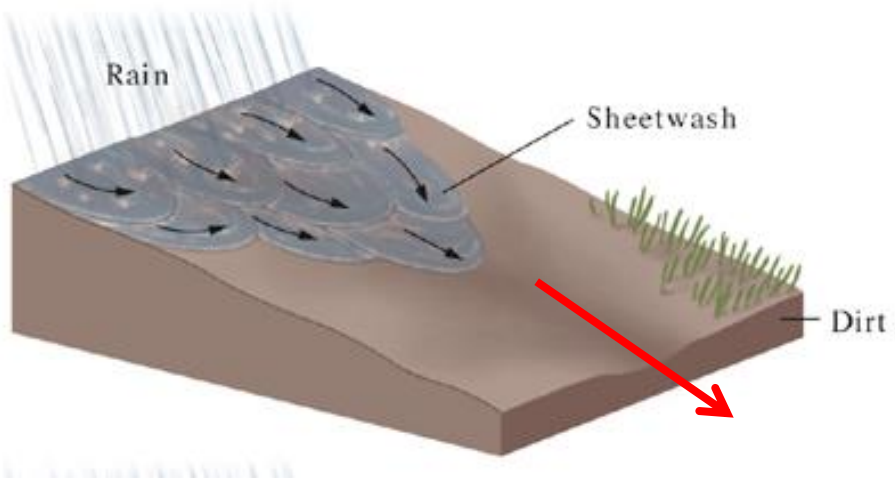
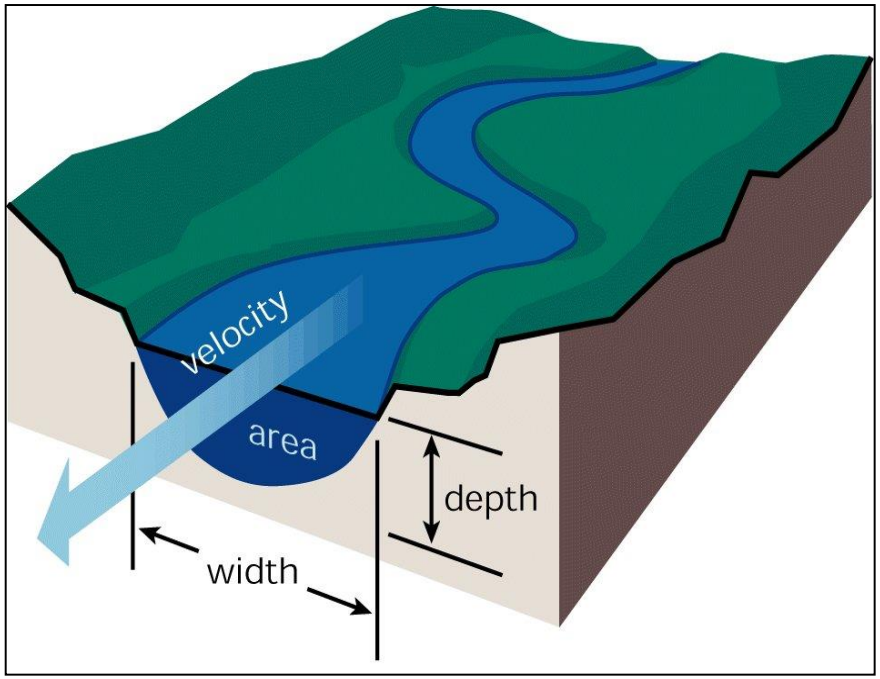


LÁMINA DE AUGA - CAUCE

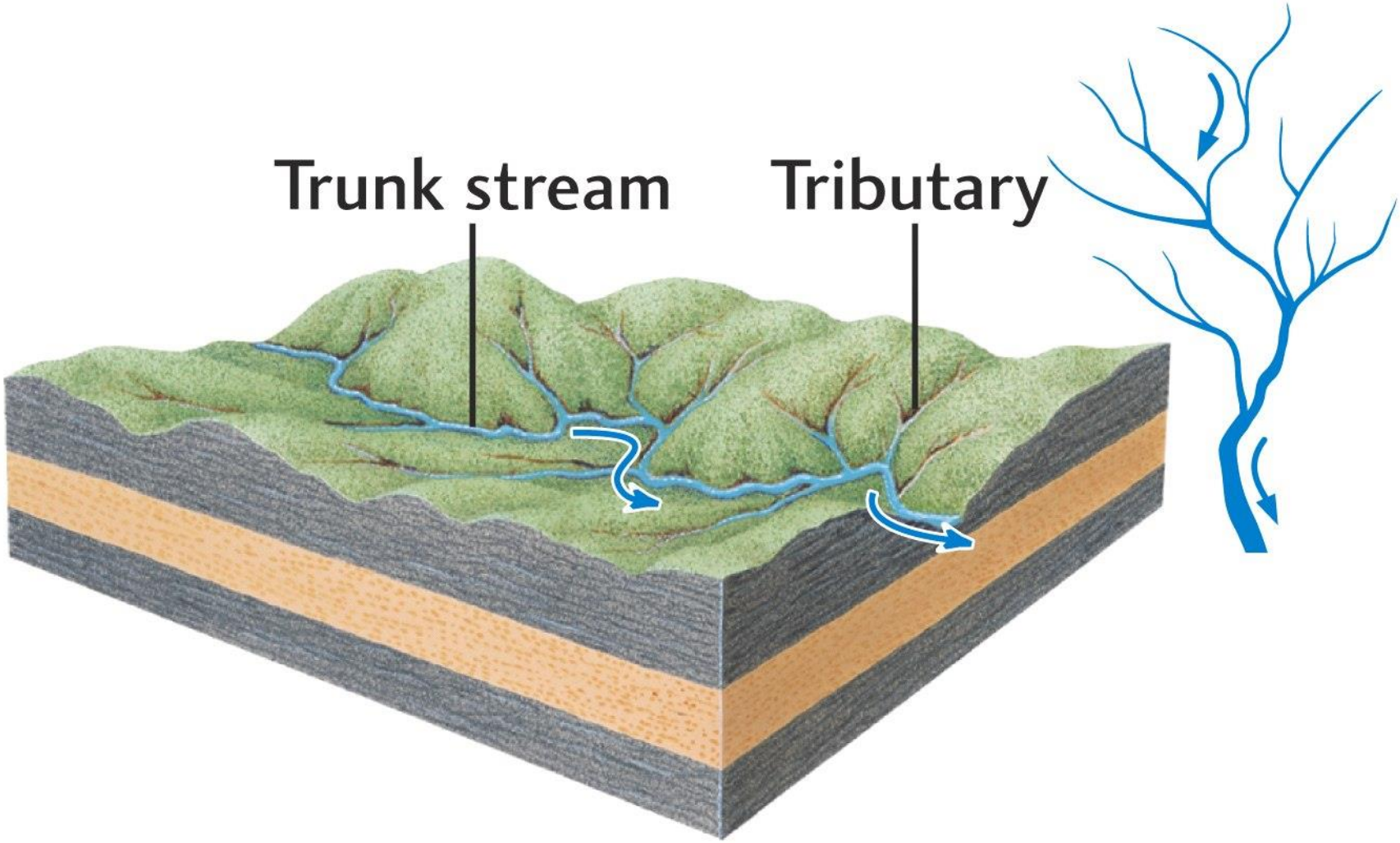


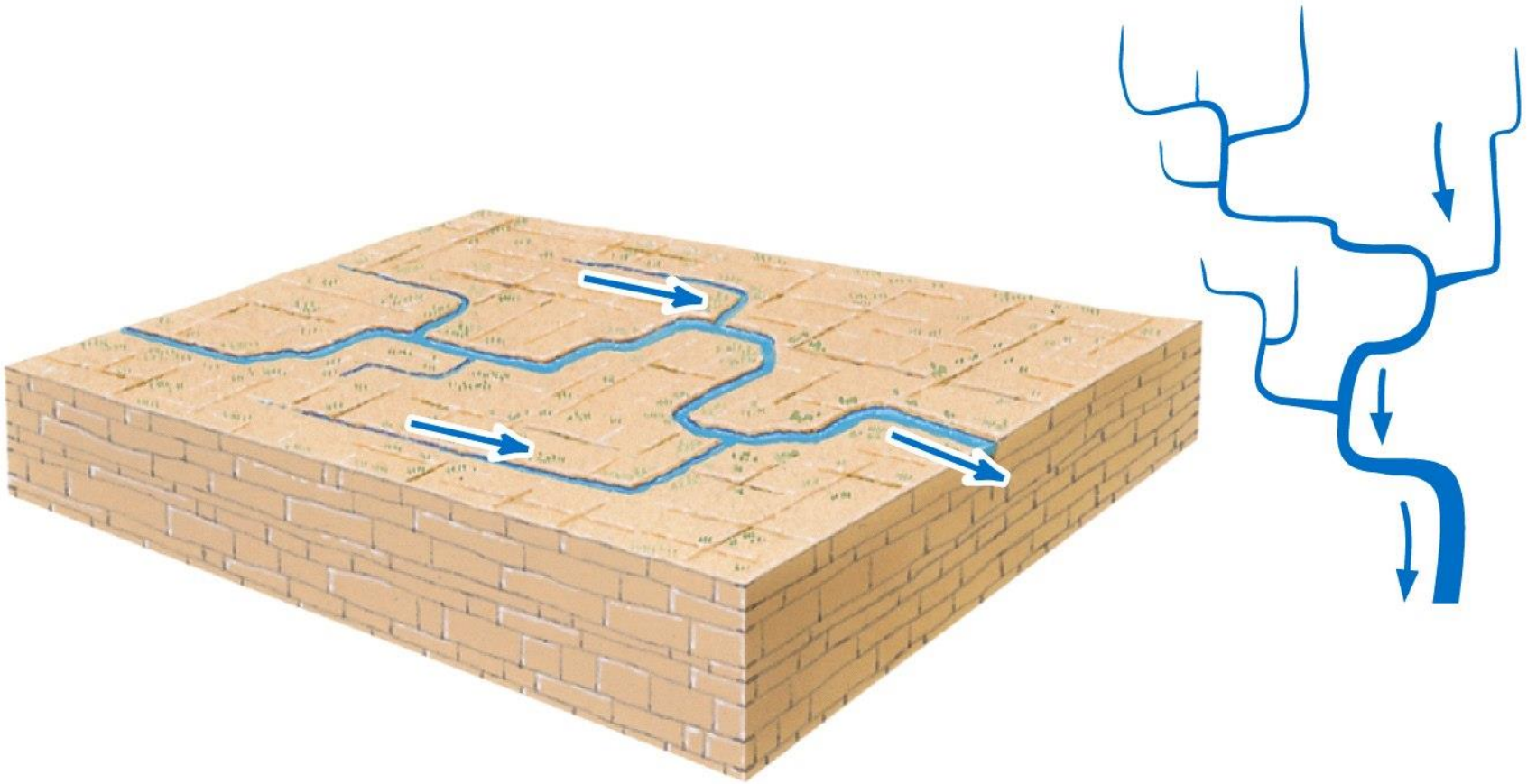


CAUCE

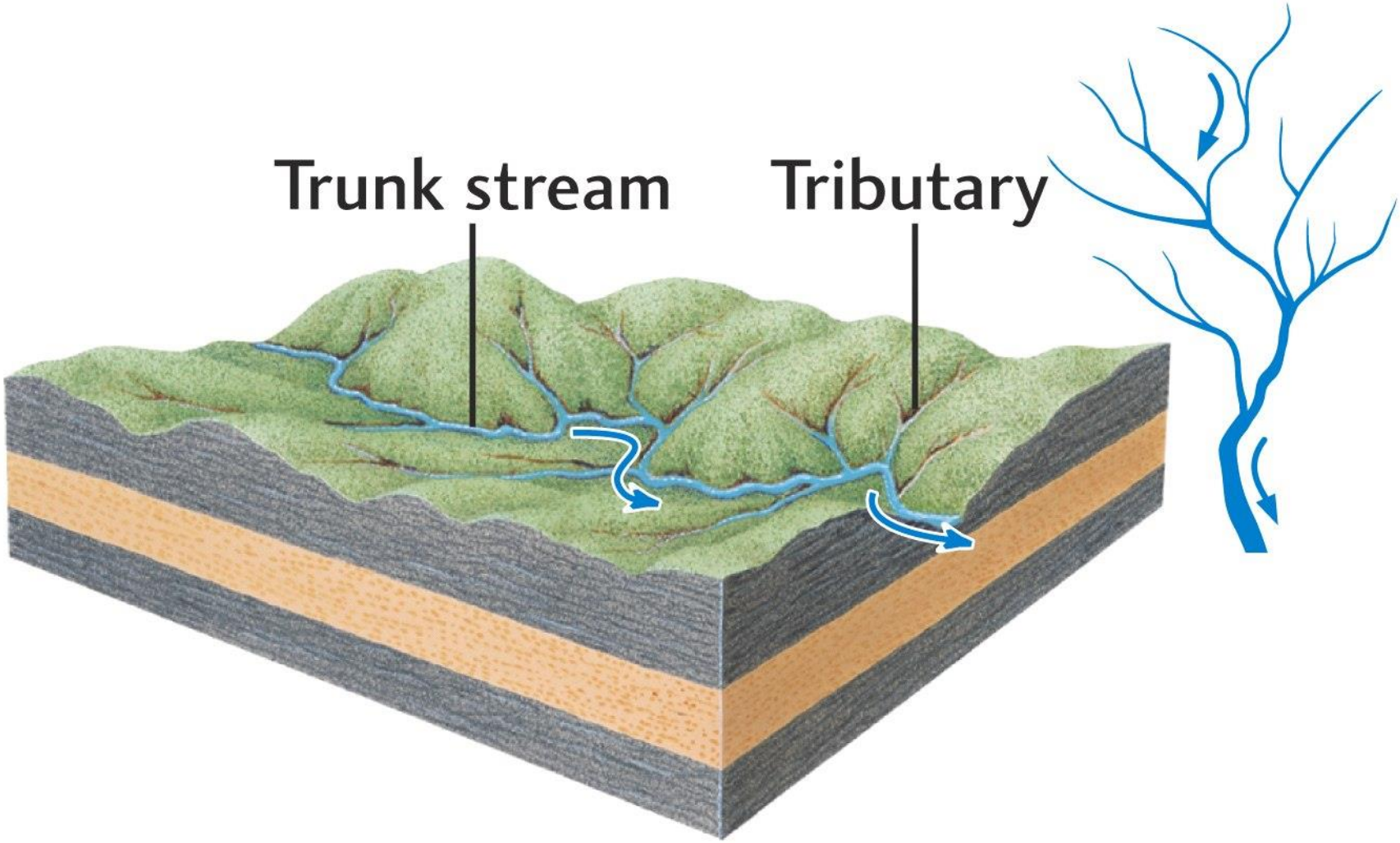
CAUDAL

REDE FLUVIAL

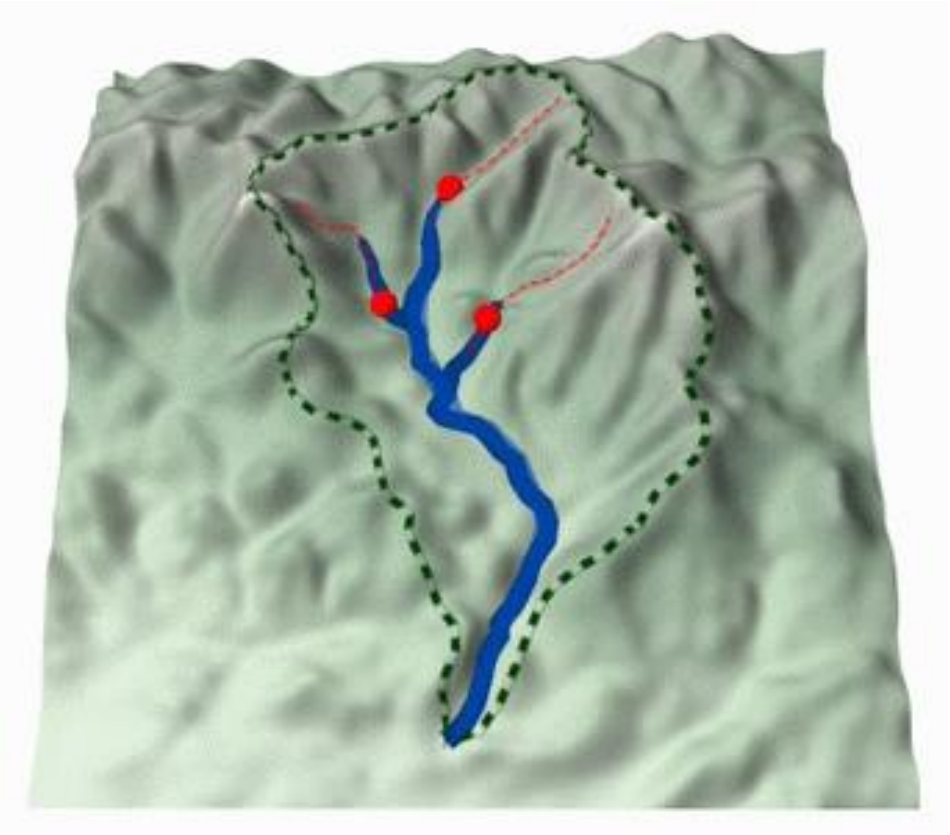


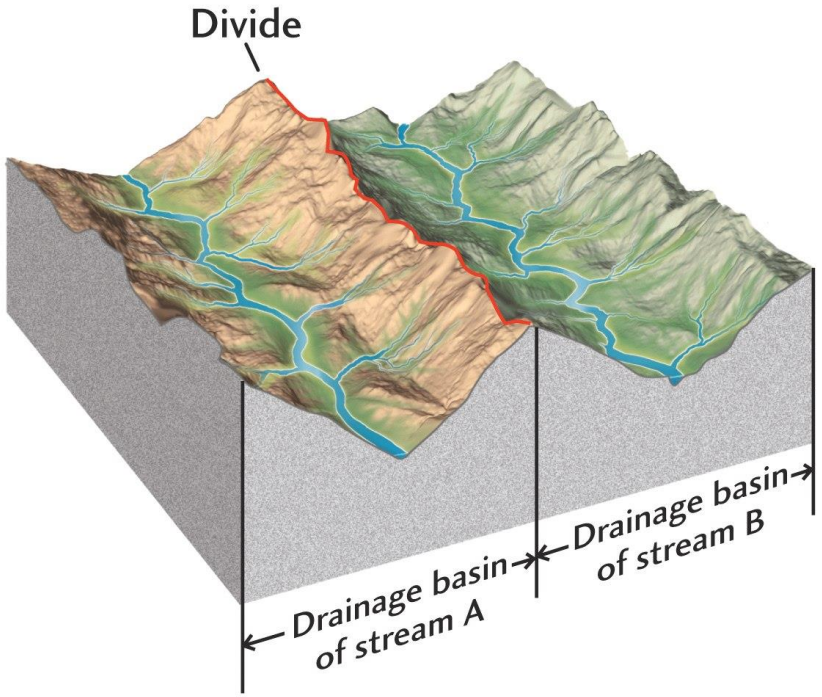


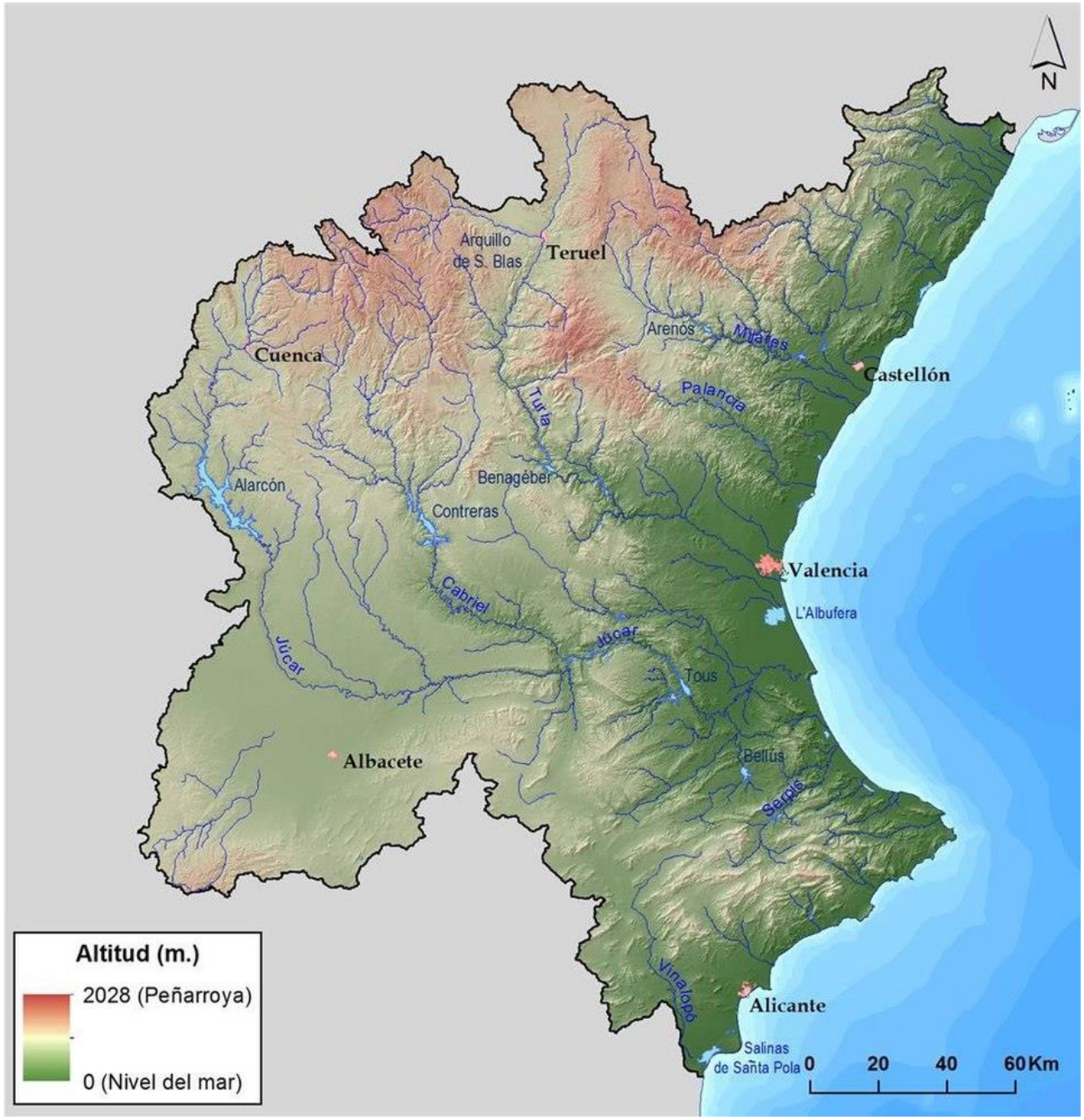
XERARQUÍA NAS AUGAS SUPERFICIAIS



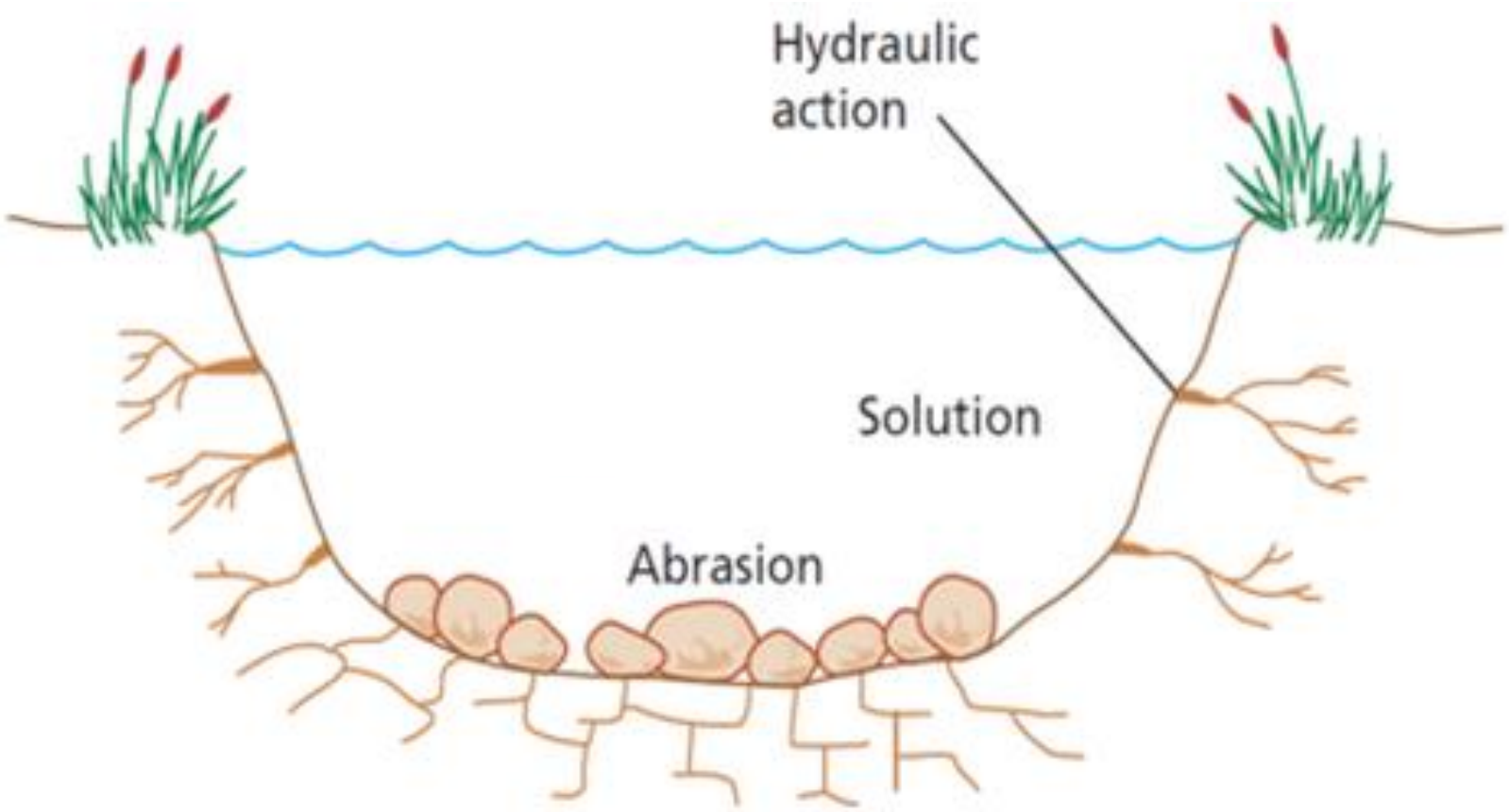
CONCA HIDROGRÁFICA



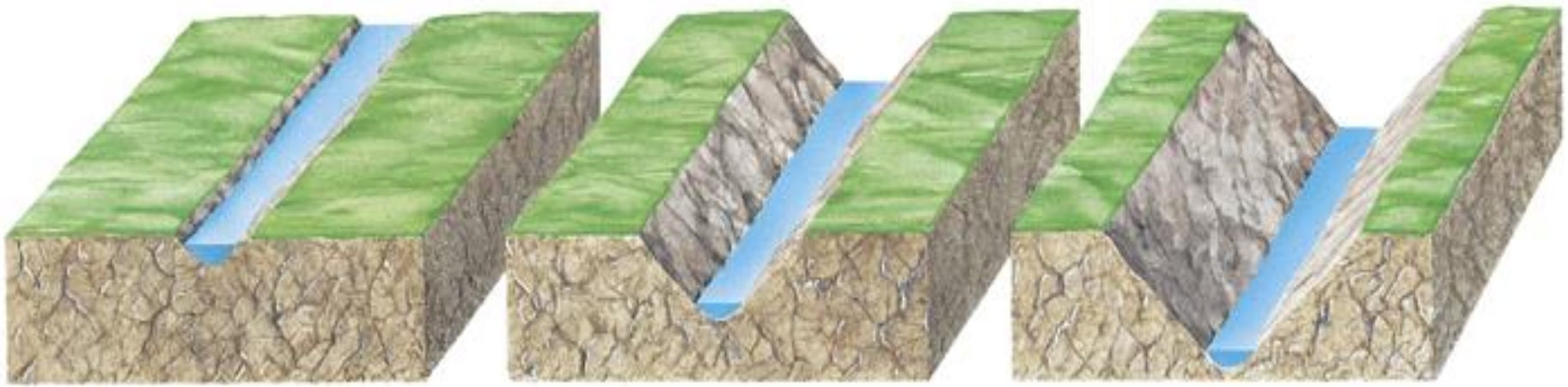



N
Arquillo de S. Blas
Teruel
Cuenca
Arenós
Millares
Castellón
Palancia
Turia
Alarcón
Benagéber
Contreras
Valencia
Cabriel
L'Albufera
Júcar
Júcar
Tous
Albacete
Bellús
Serpis
Vinalopó
Alicante
Salinas de Santa Pola
0 20 40 60 Km
Altitud (m.)
2028 (Peñarroya)
0 (Nivel del mar)

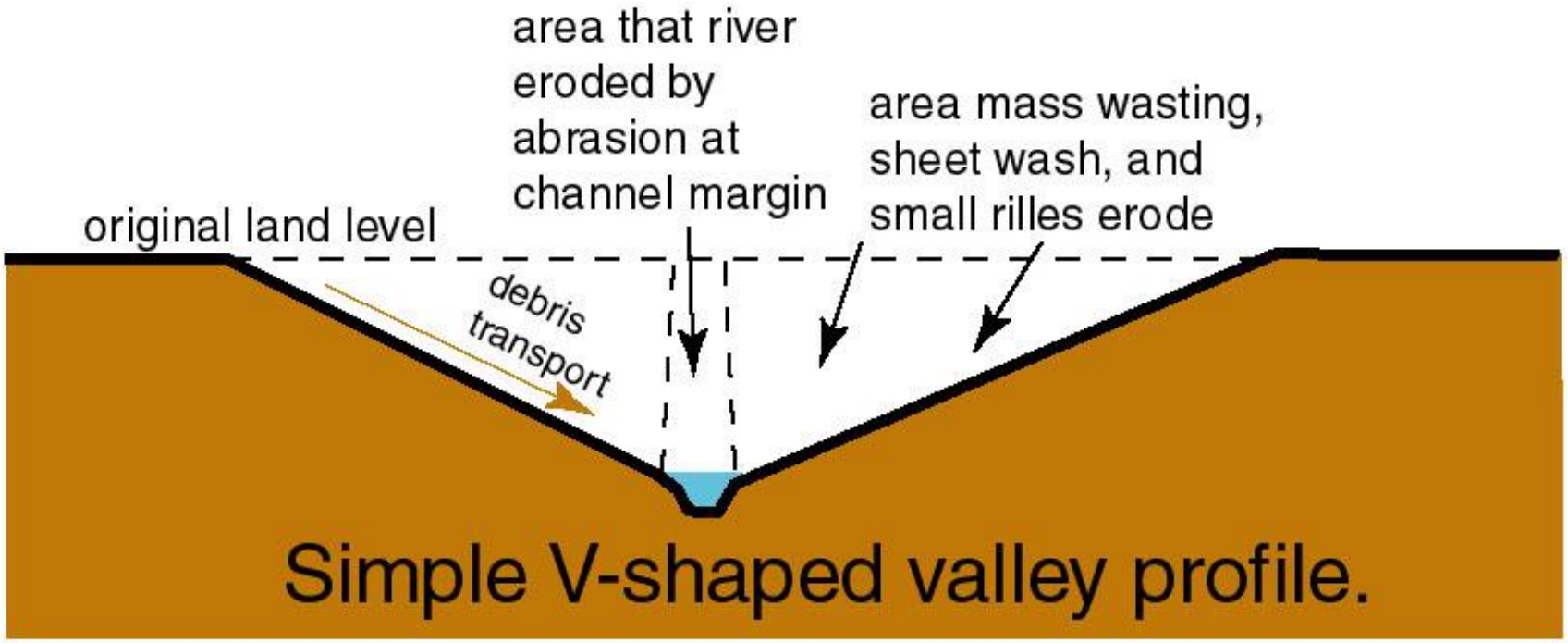
EROSIÓN FLUVIAL



PROFUNDAMENTO CAUCE
RETROCESO LADEIRAS



VAL EN V


area that river
eroded by
abrasion at
channel margin
area mass wasting,
sheet wash, and
small rilles erode
original land level
debris
transport
Simple V-shaped valley profile.

AS AUGAS SALVAXES:

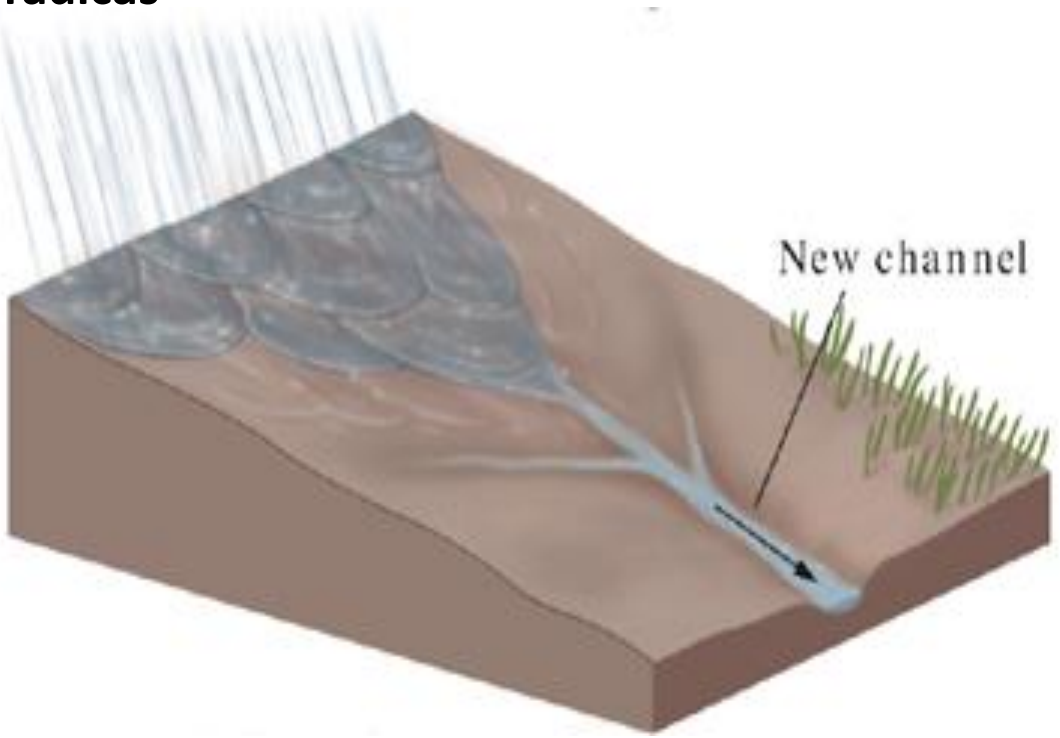
CAUCE NON FIXO

CAUDAL NON FIXO

Choivas fortes e esporádicas

ou

desxeos



MATERIAIS POUCO CONSISTENTES E IMPERMEABLES:

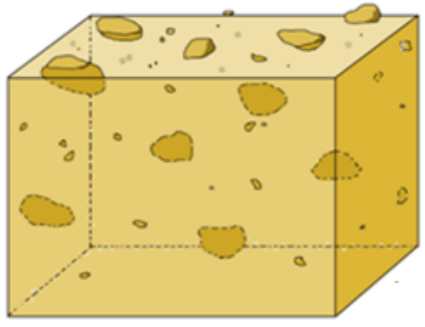
CAVORCOS, CÁRCAVAS, BARRANCOS, BADLANDS

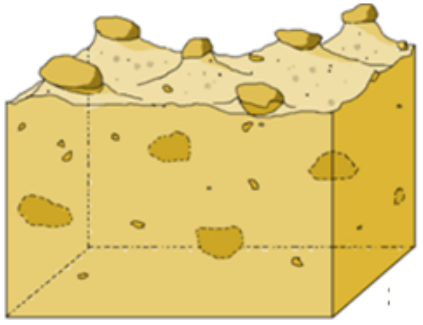
Cavorcos, barrancos, badlands

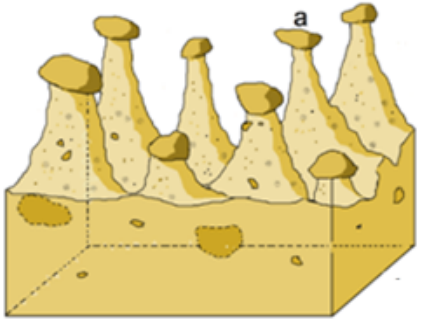
CAVORCOS OU BADLANDS

Se hai materiais con distinta resistencia:

CHEMINEAS DE FADAS







TORRENTES

CAUCE FIXO

CAUDAL IRREGULAR, ESTACIONAL

RAMBLAS, RIERAS

(Zonas mediterráneas)

RAMBLA DE BELÉN, ALMERÍA

11 de Septiembre de 1891, Almeria arrasada por una tormenta

OBRAS DE ACONDICIONAMENTO

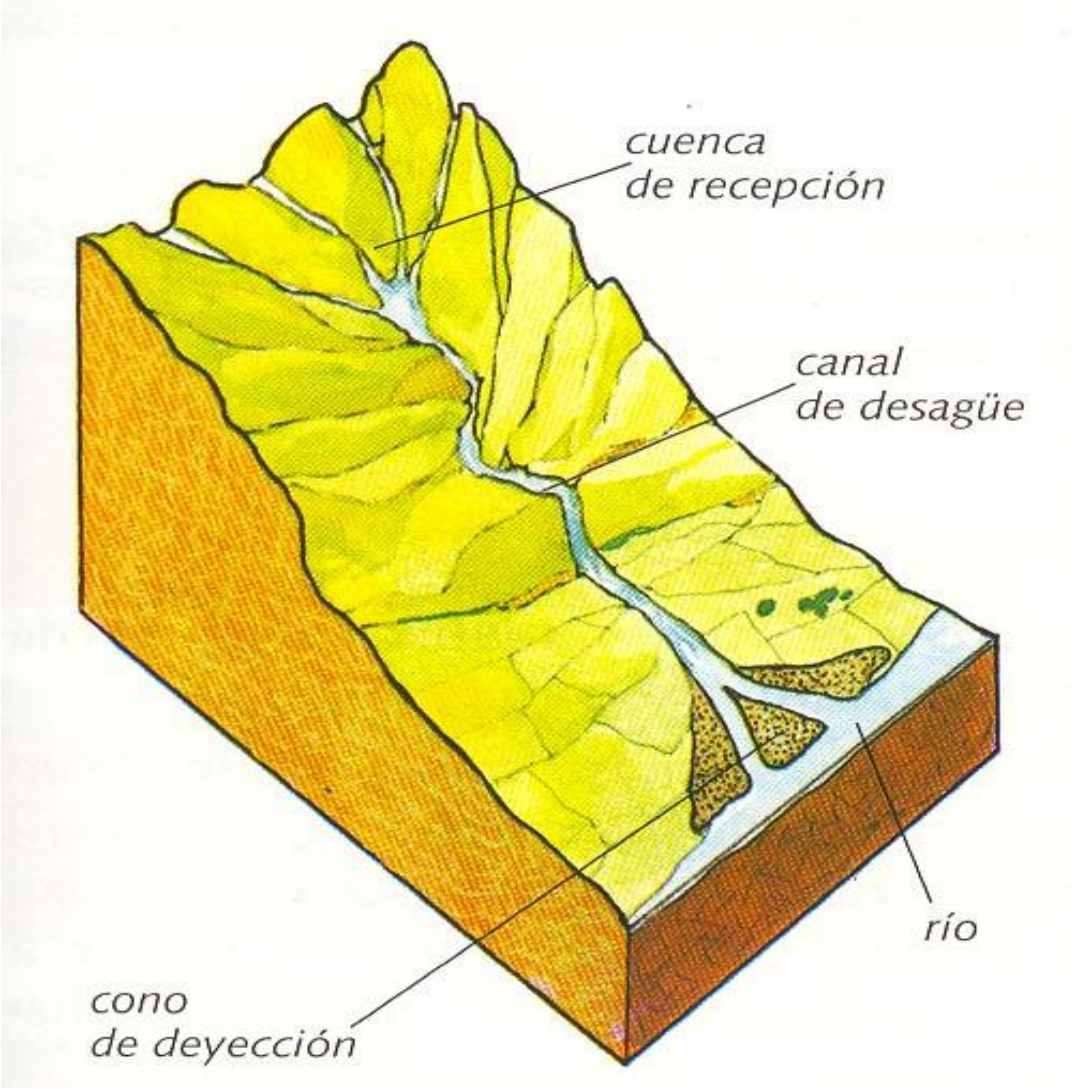
Barranco del Poyo, torrente de Valencia

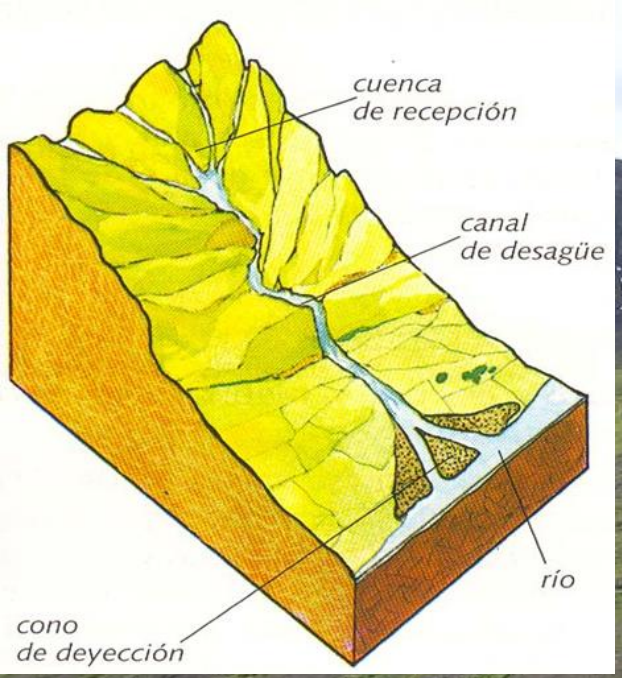
29 de octubre de 2024,
lluvias torrenciales por la DANA

UADI

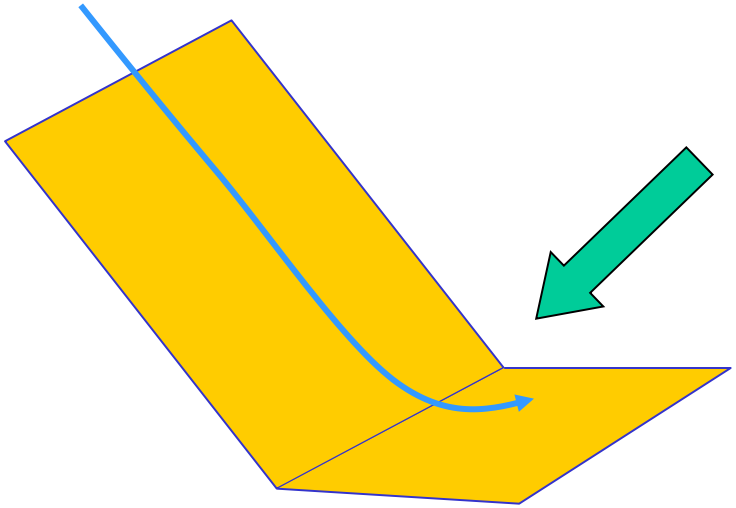
(en árabe)

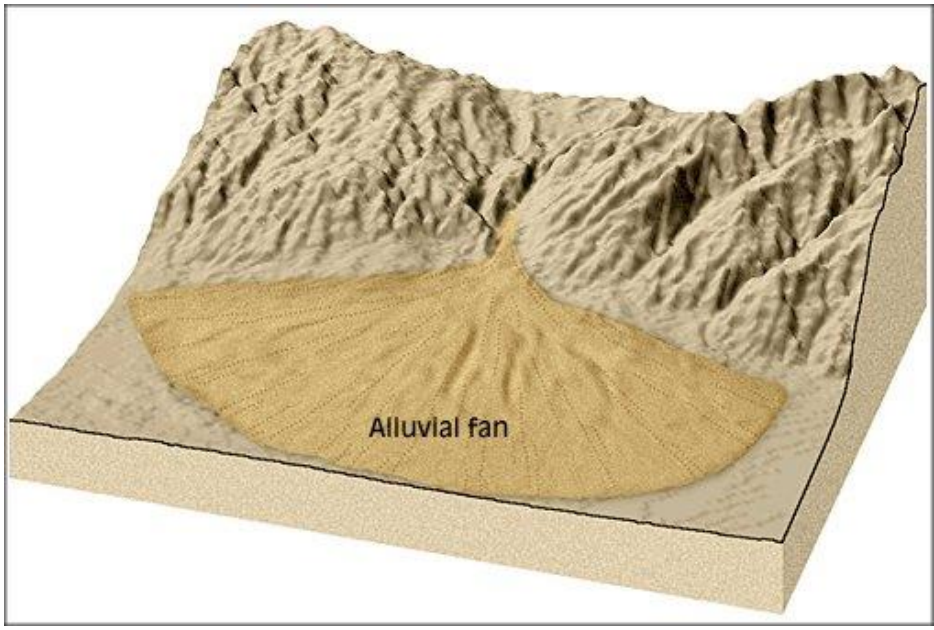
TORRENTES DE MONTAÑA




cuenca
de recepción
canal
de desagüe
río
cono
de deyección

ABANOS ALUVIAIS OU CONOS DE DEXECCIÓN





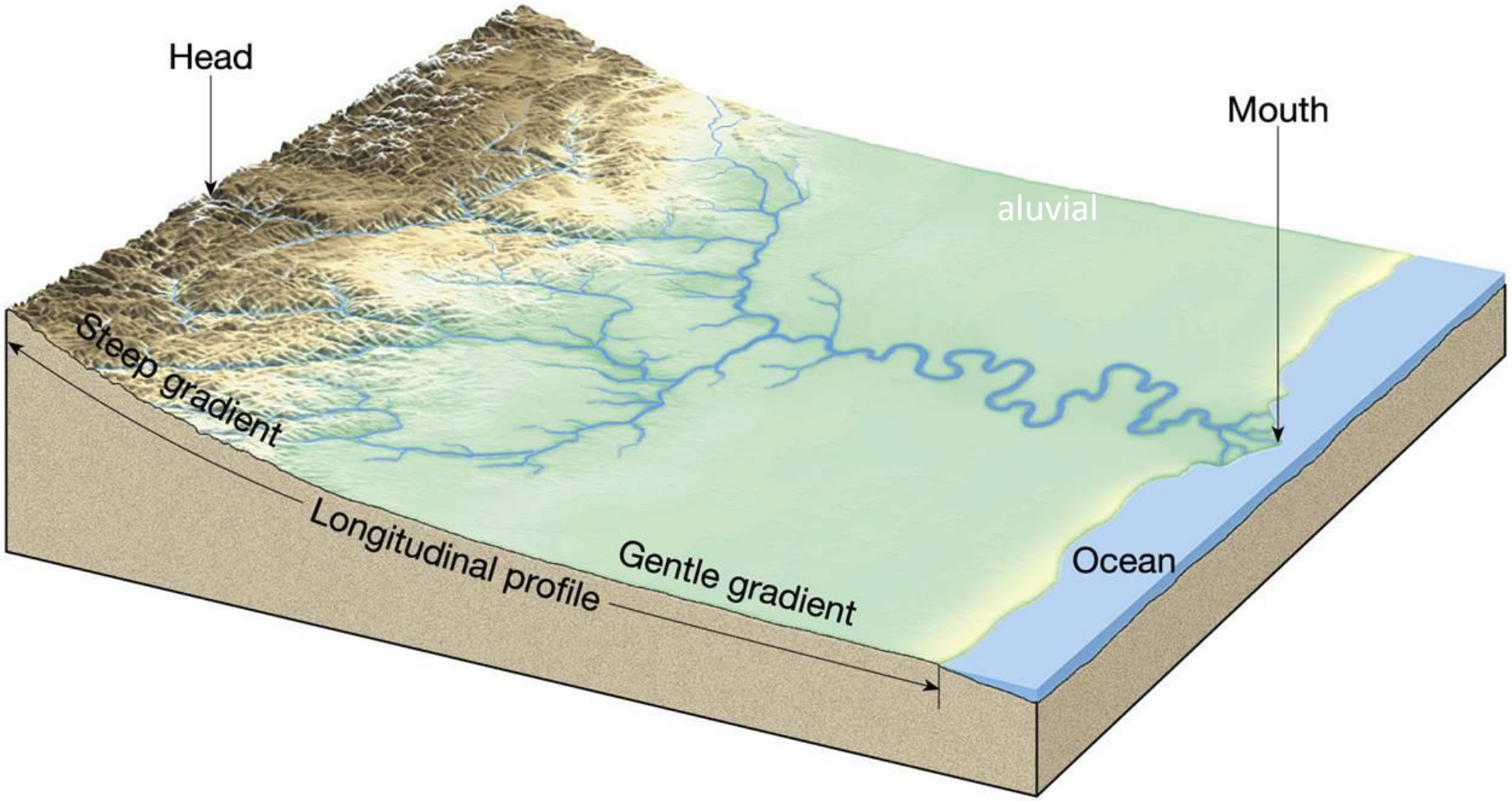
Zonas de montaña con **torrentes** que rematan cun **cambio brusco na pendente**


Alluvial fan
Playa
lake
Road

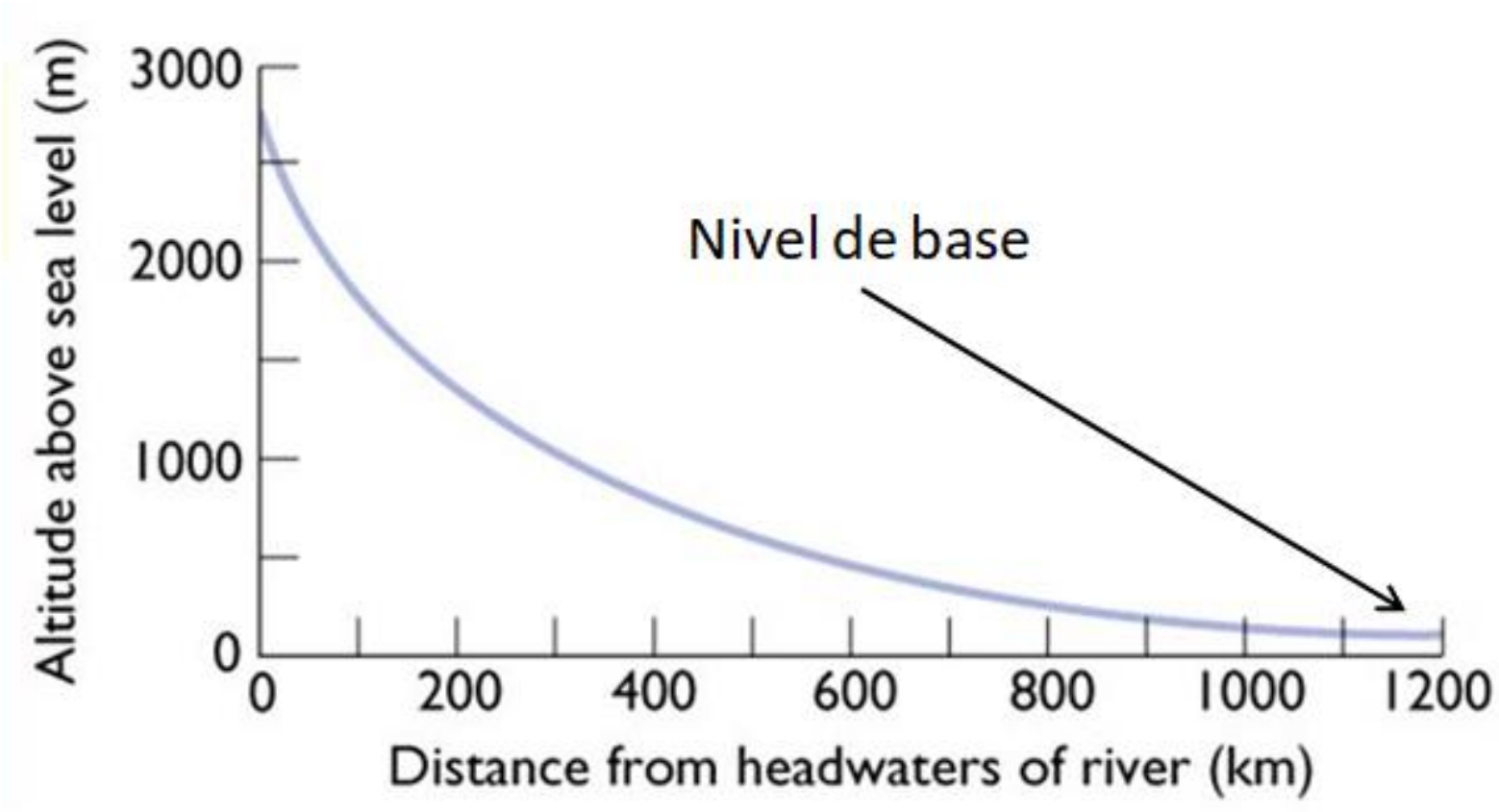
RÍOS

CAUCE E CAUDAL PERMANENTES

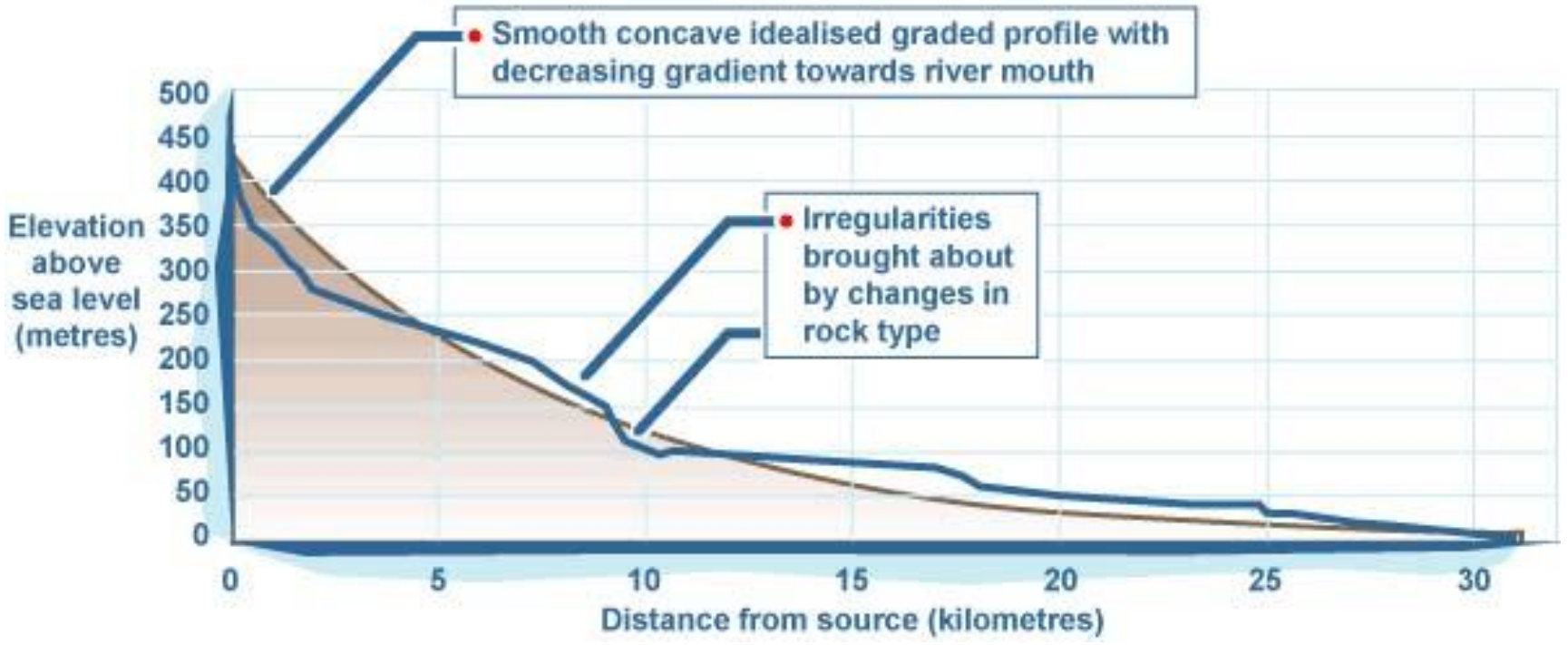
PERFIL LONXITUDINAL DUN RÍO



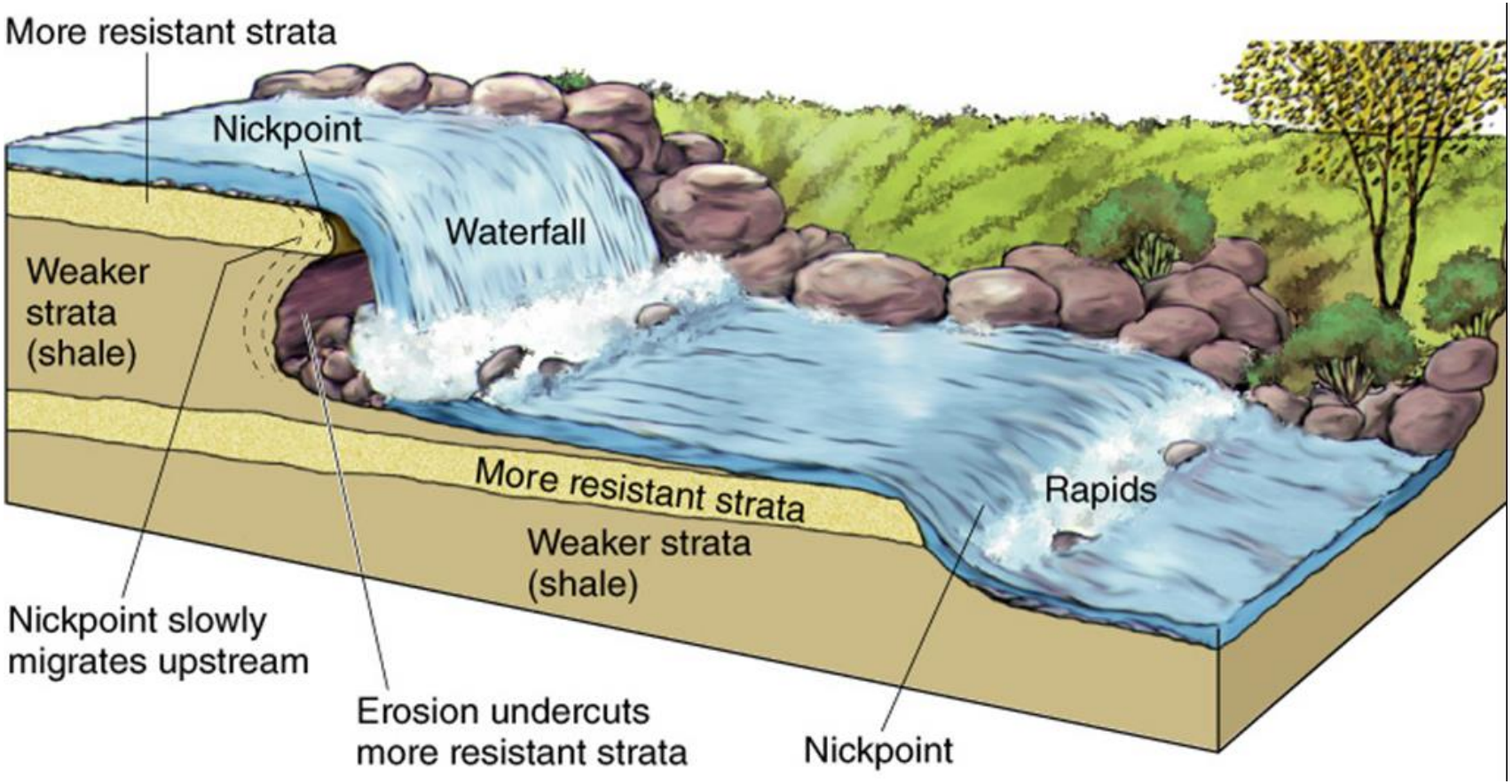
PERFIL DE EQUILIBRIO



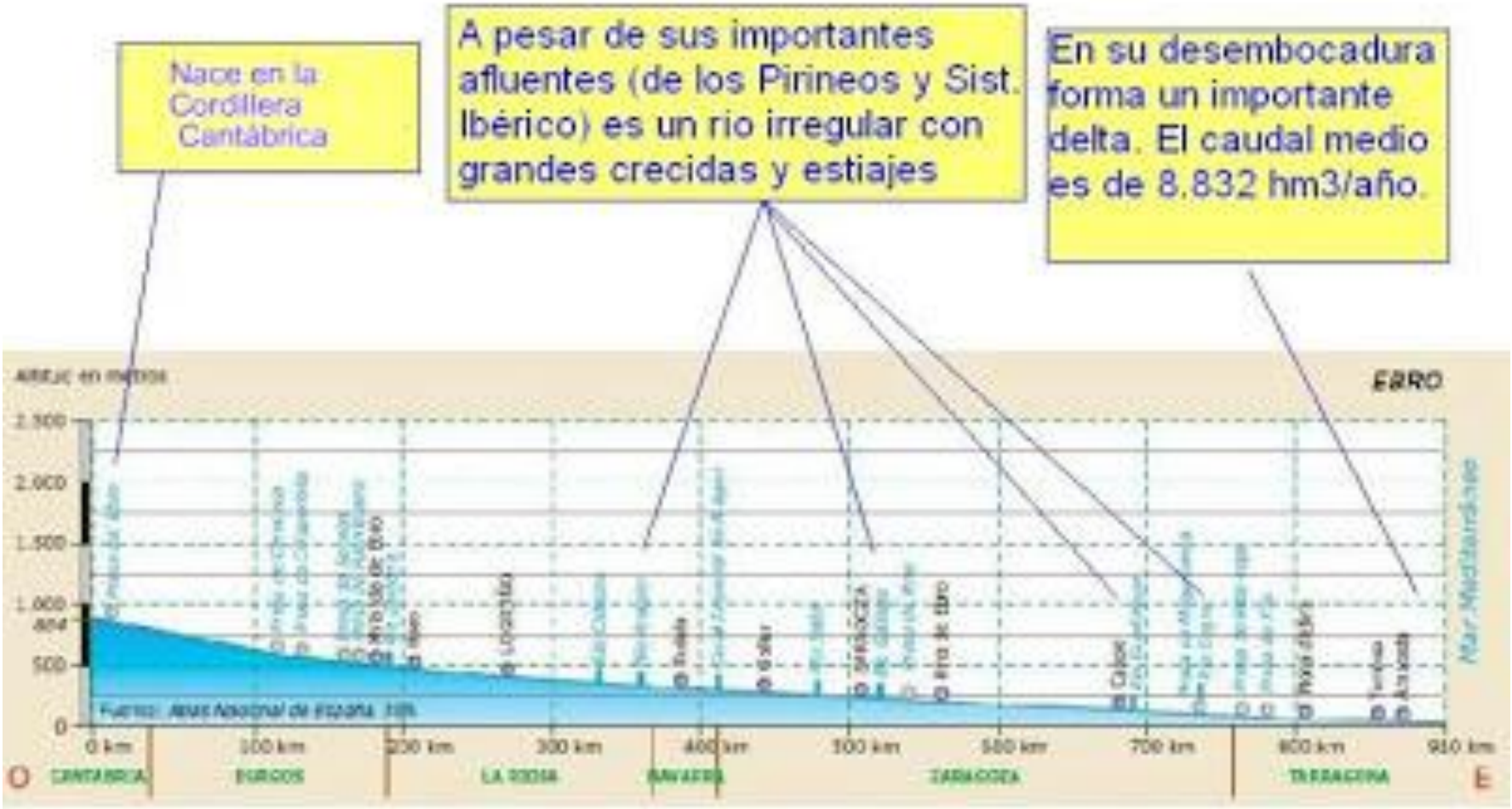
IRREGULARIDADES: KNICKPOINTS



FERVENZAS, RÁPIDOS

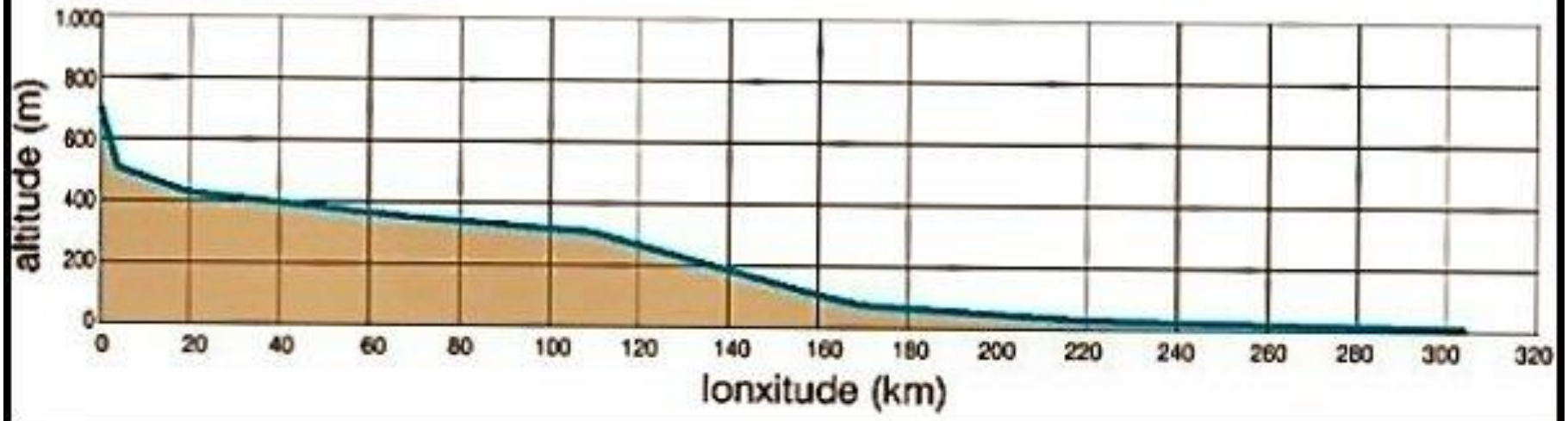


PERFIL DO RÍO EBRO

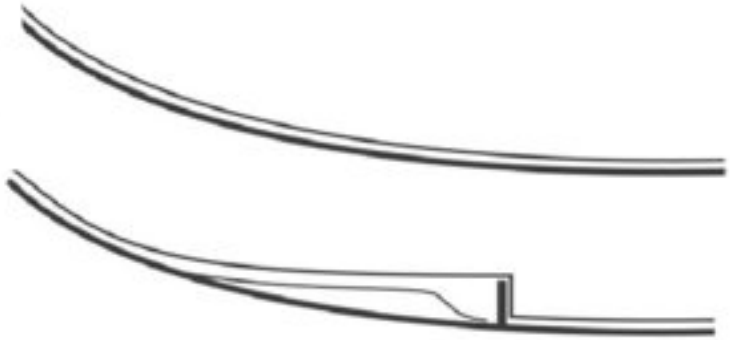


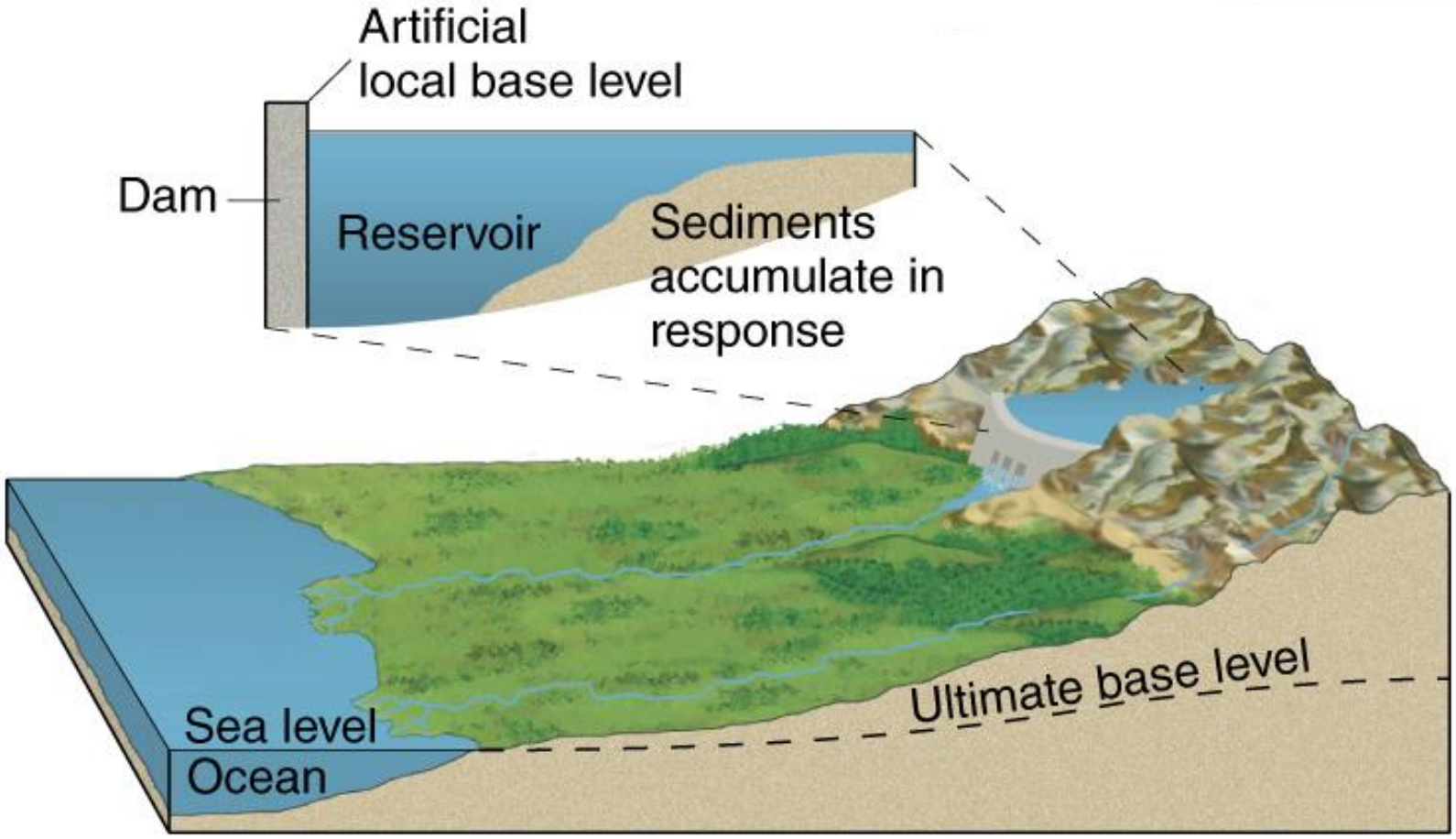
Perfil do río Miño

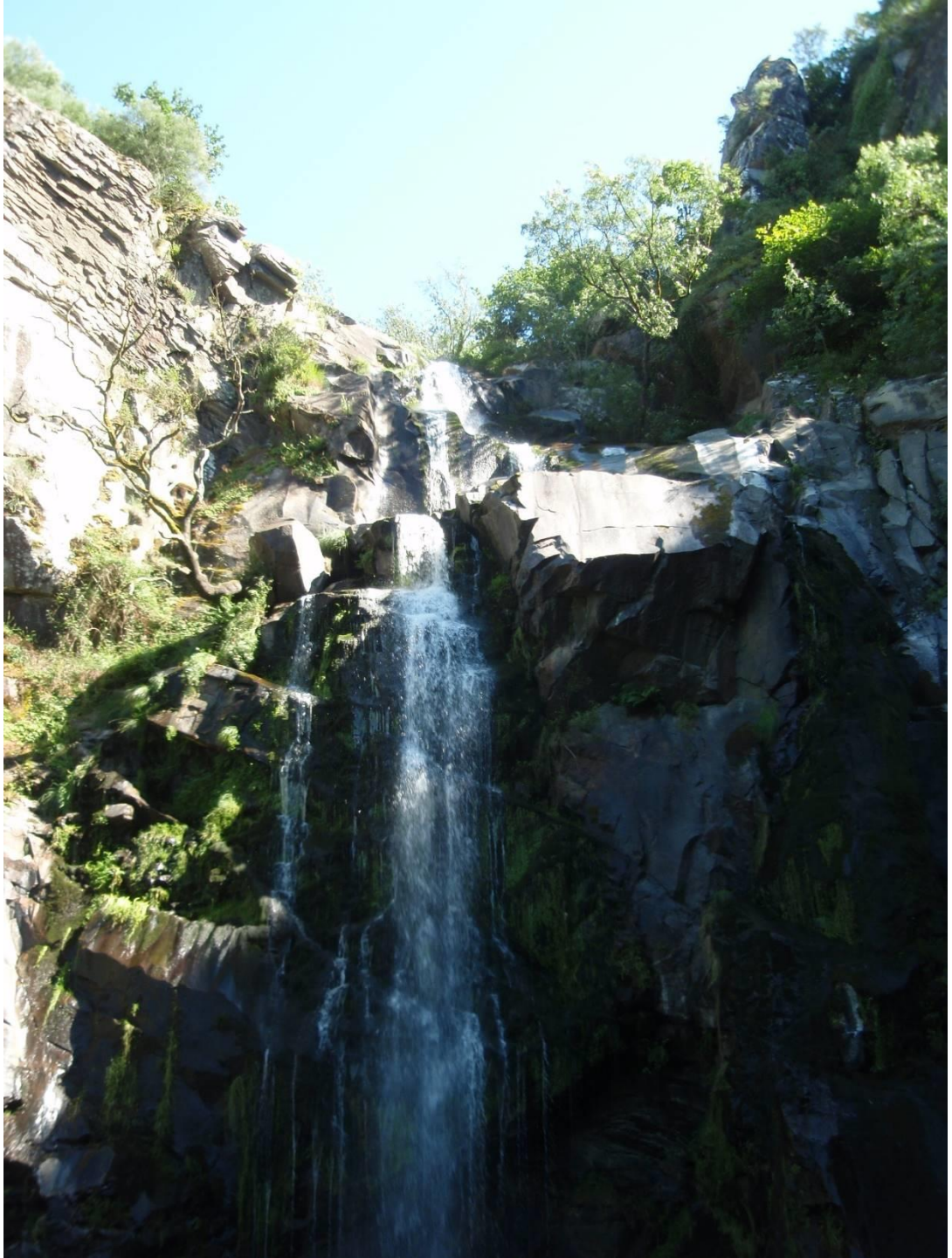
O río Miño salva, dende o nacemento ata a desembocadura 695 m. de desnivel.



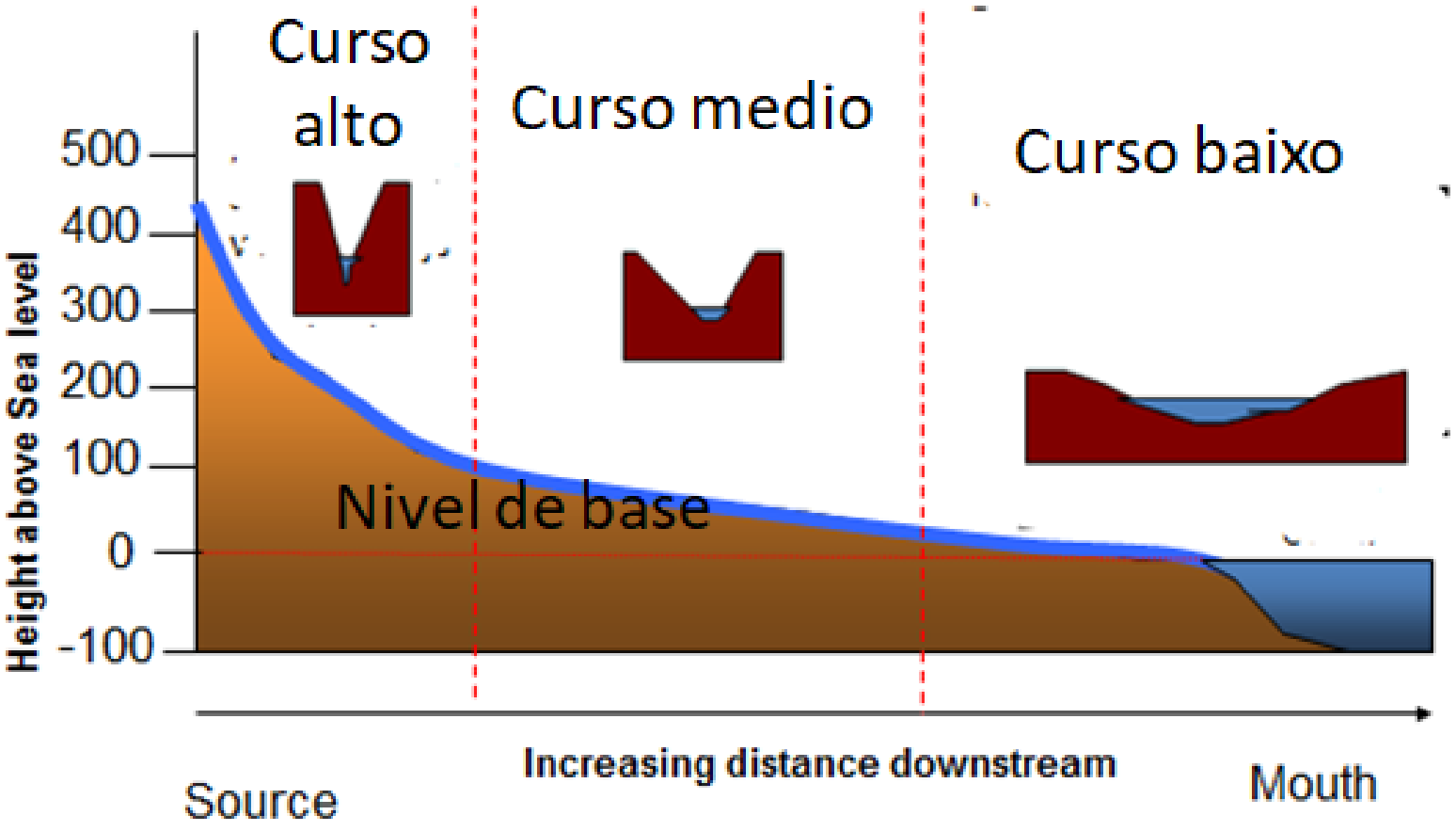
NIVEL DE BASE LOCAL







TRAMOS NO CURSO DUN RÍO



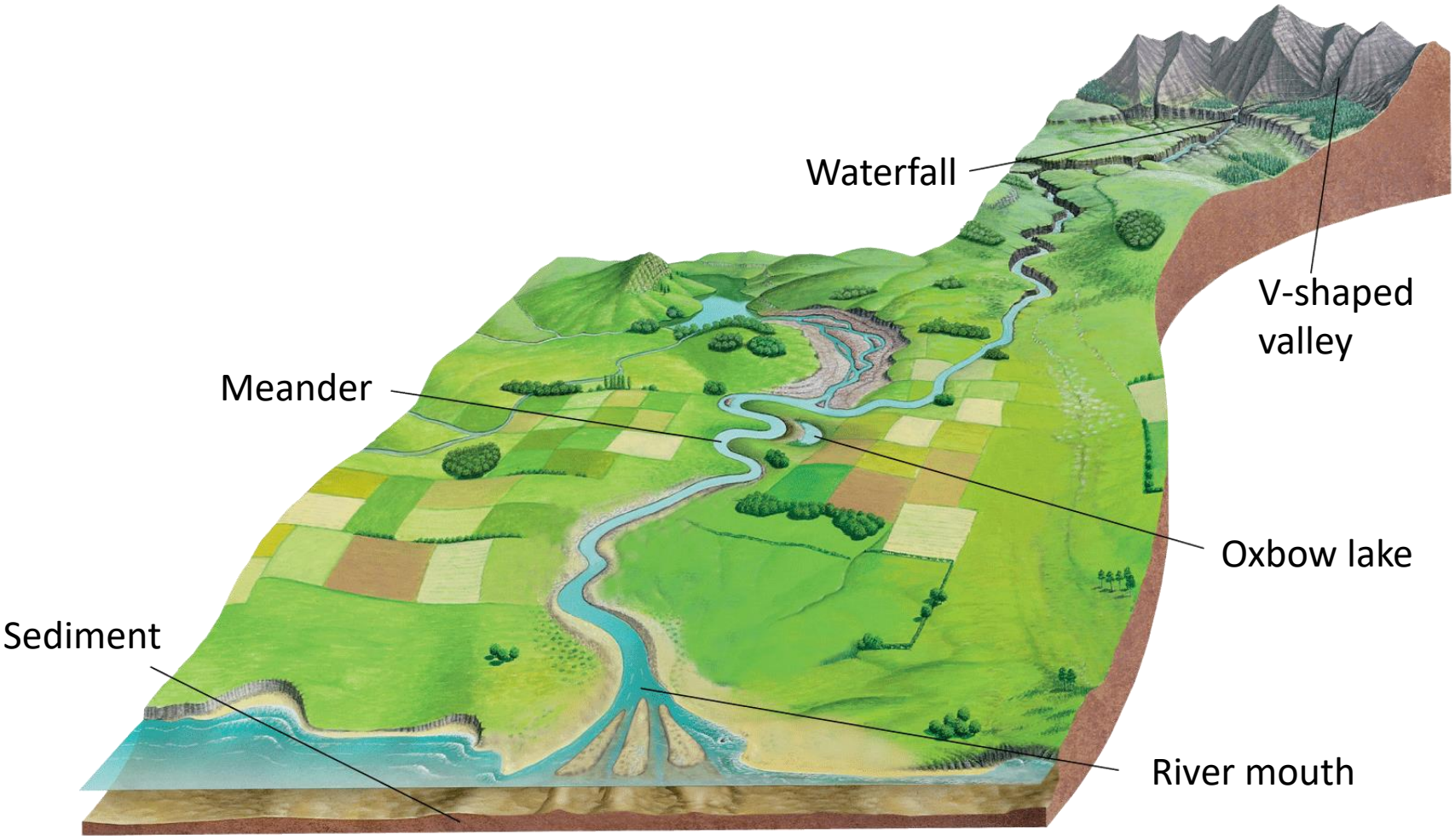

CURSO ALTO

CANÓNS

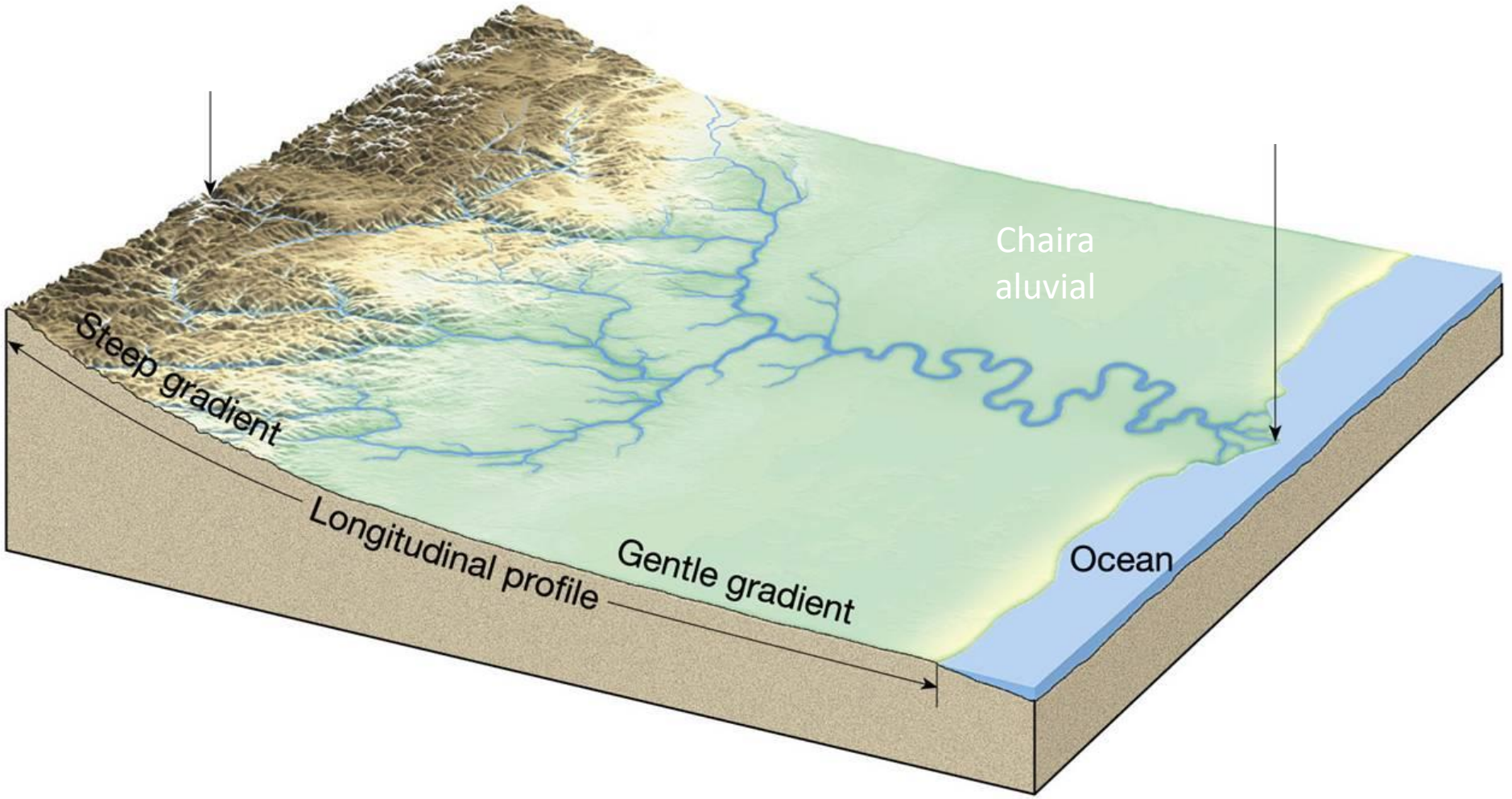
Vales fluviais profundos e estreitos

MARMITAS DE XIGANTE

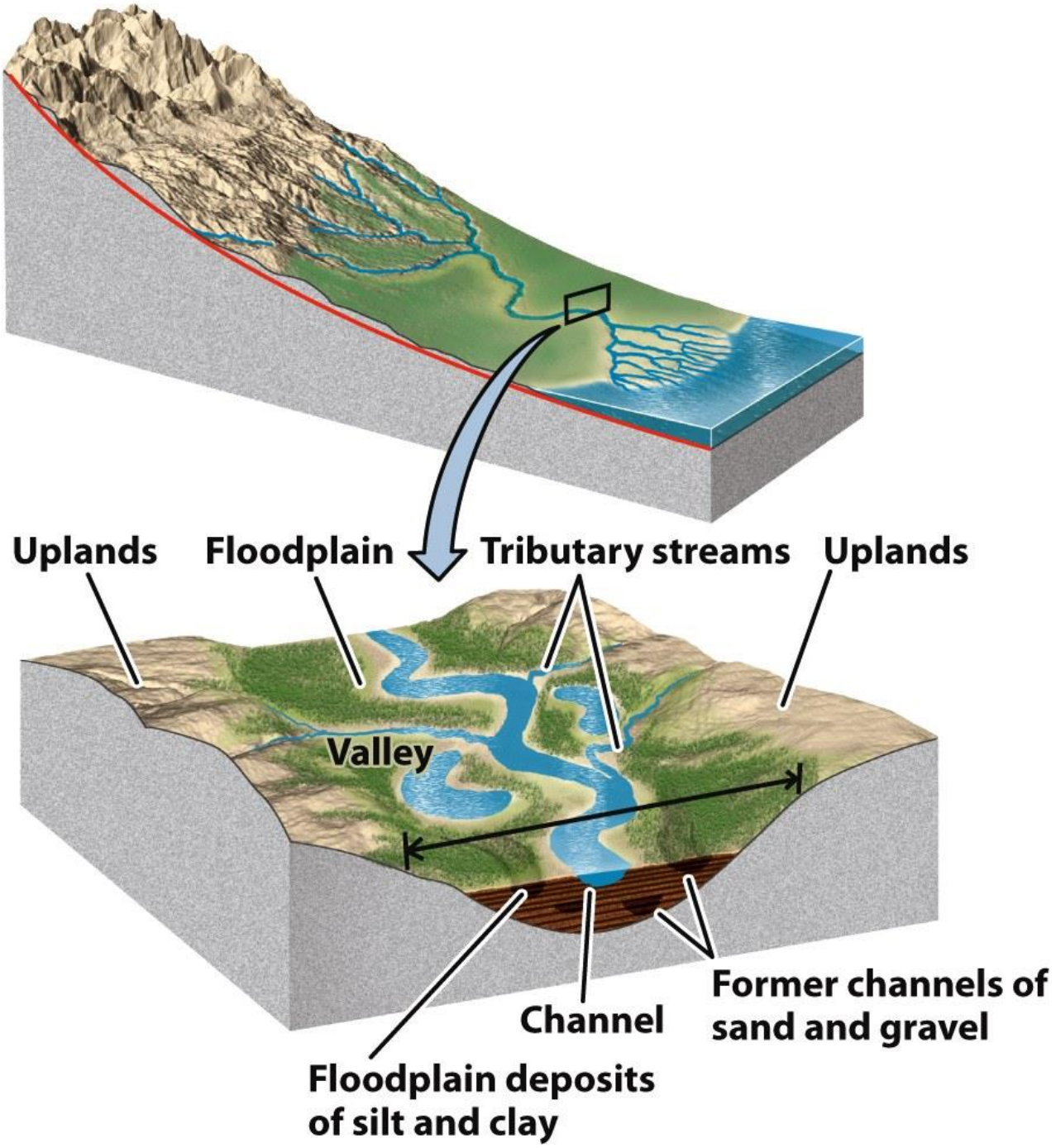
CURSO MEDIO

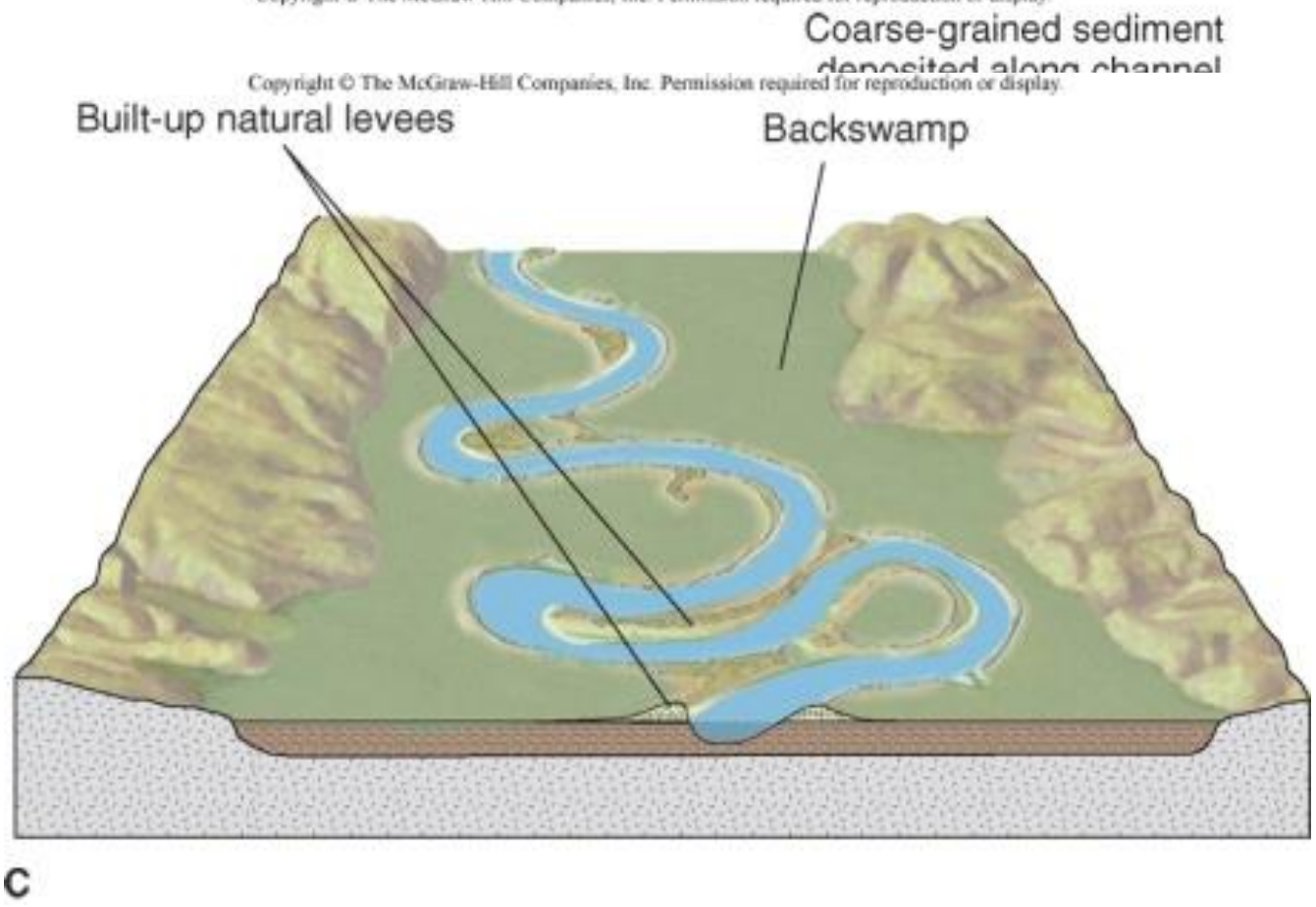

Waterfall
V-shaped valley
Meander
Oxbow lake
Sediment
River mouth

CURSO BAIXO


Chaira
aluvial
Steep gradient
Longitudinal profile
Gentle gradient
Ocean

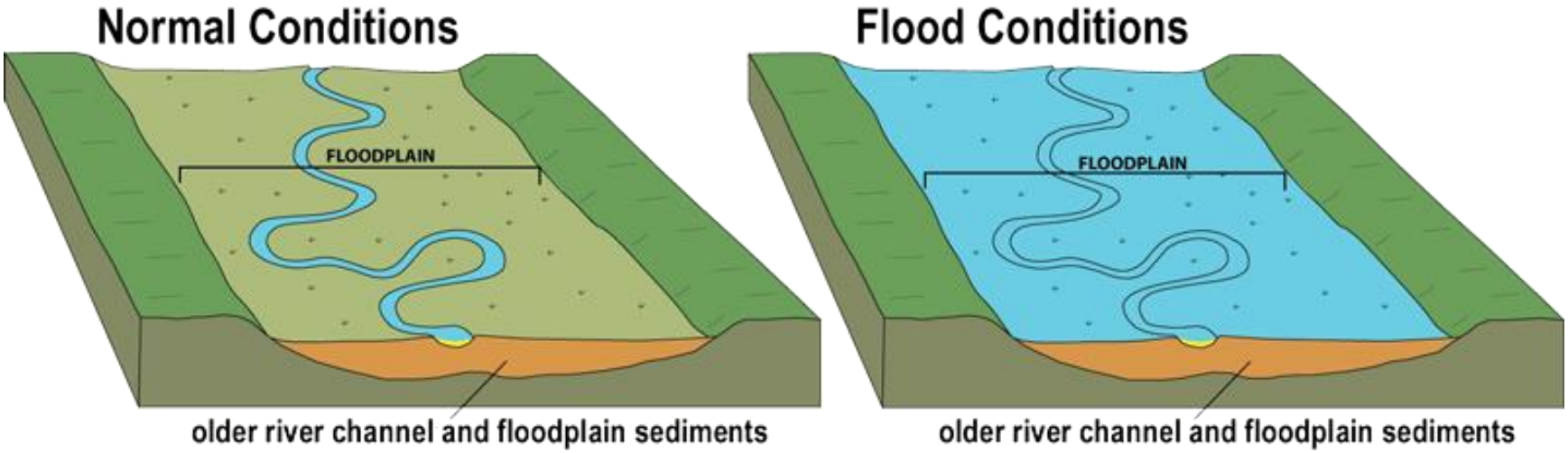
CHAIRAS ALUVIAIS





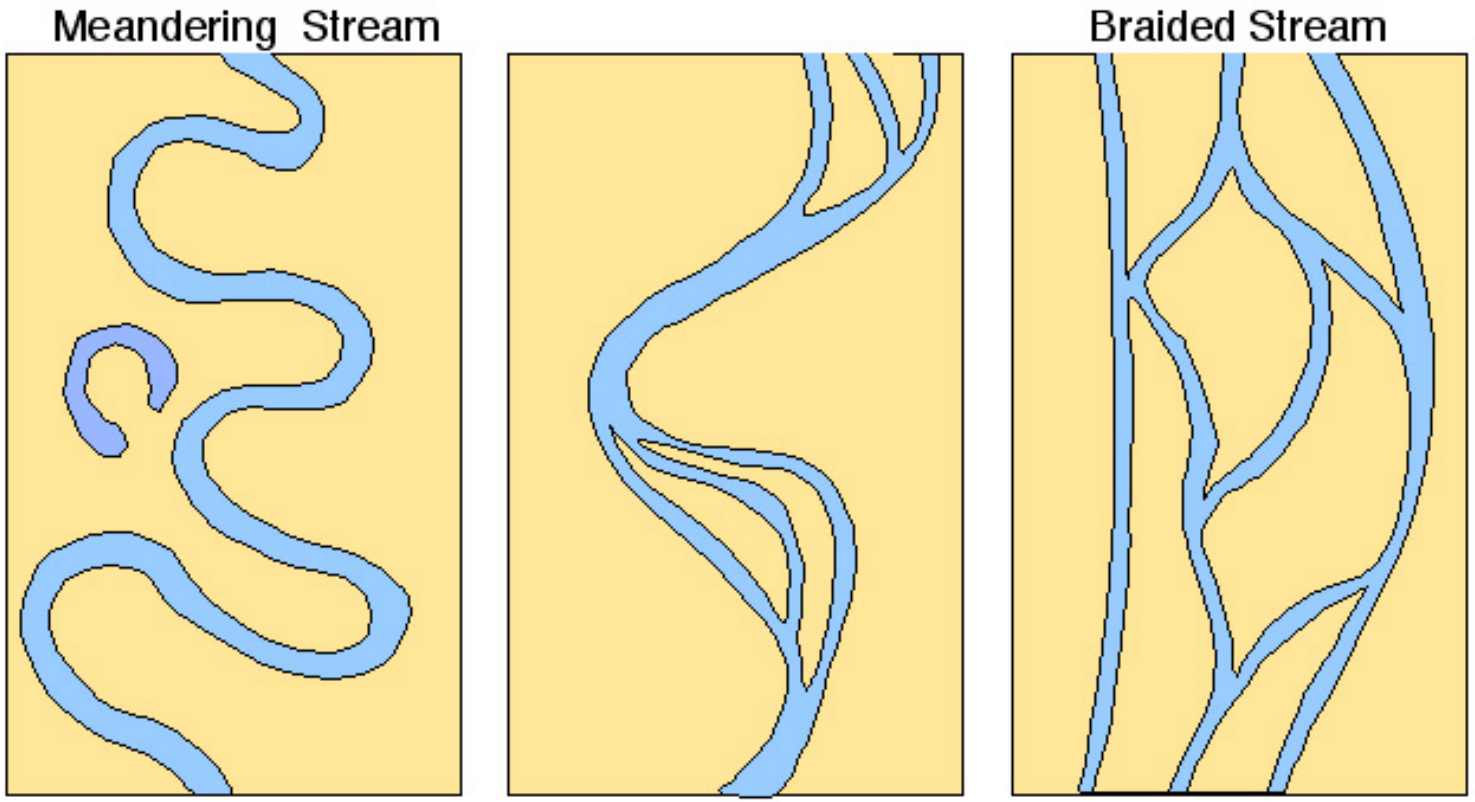
CHAIRA ALUVIAL OU DE INUNDACIÓN

CHAIRA DE INUNDACIÓN



Chaira aluvial do Miño dende o monte Aloia

CAUCES MEANDRIFORMES E ANASTOMOSADOS



Favorable factors:
Fine sediment (much suspended load)
Relatively constant flow
Dense vegetation

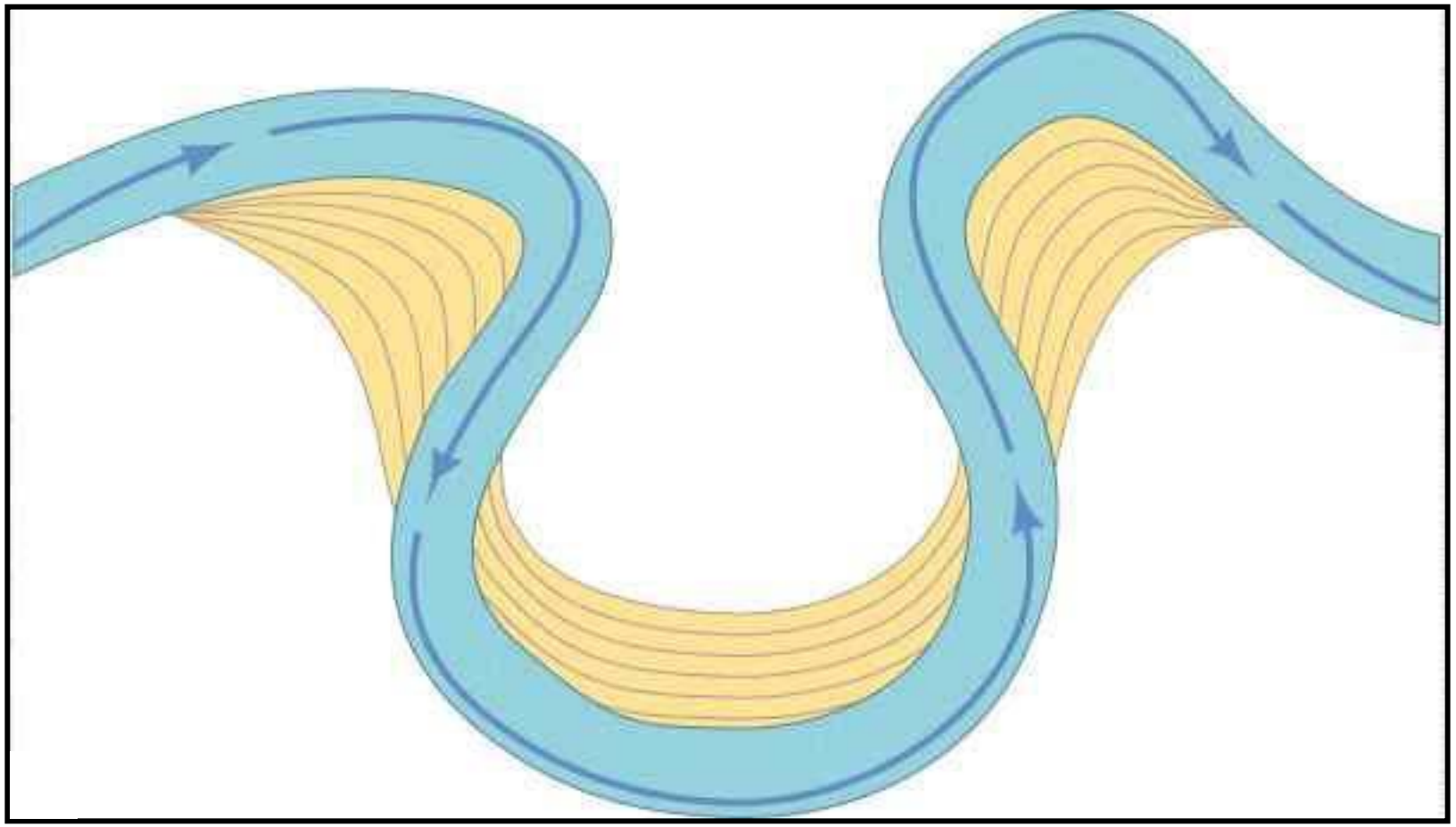
Favorable factors:
Coarse sediment (much bed load)
Variable flow
Sparse vegetation

TRENZADOS, BRAIDED, ANASTOMOSADOS

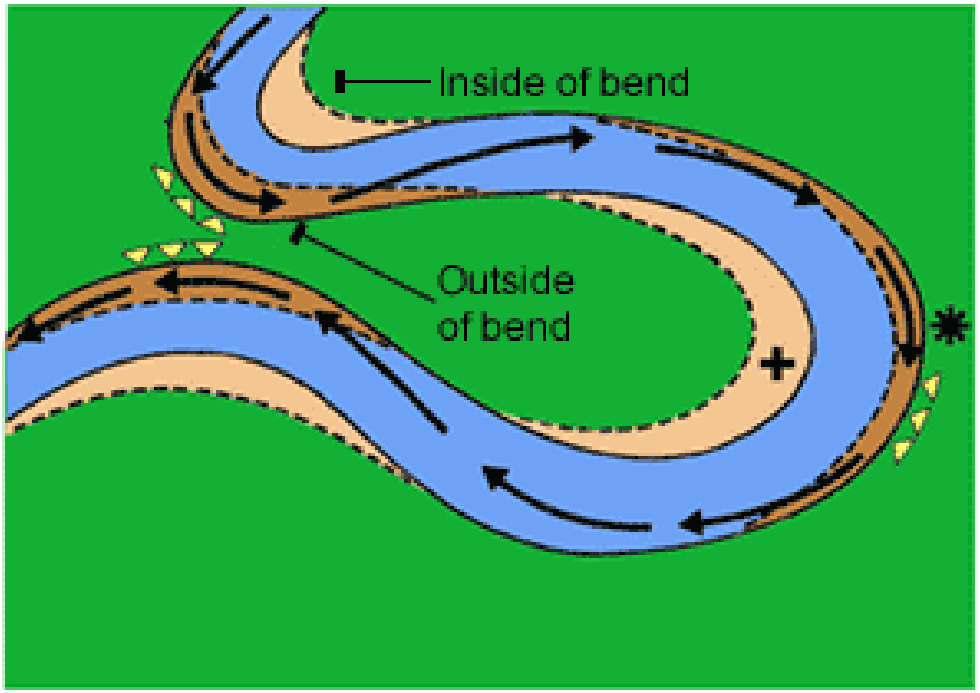
MEANDRIFORMES

MEANDROS

VELOCIDADE DA AUGA?



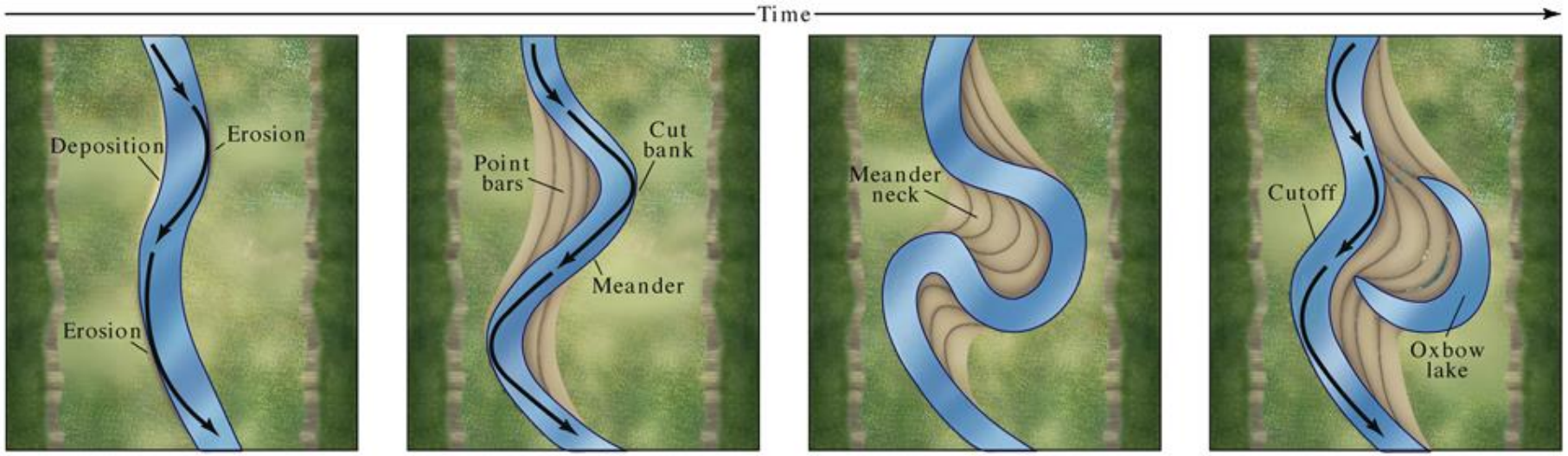
MEANDROS



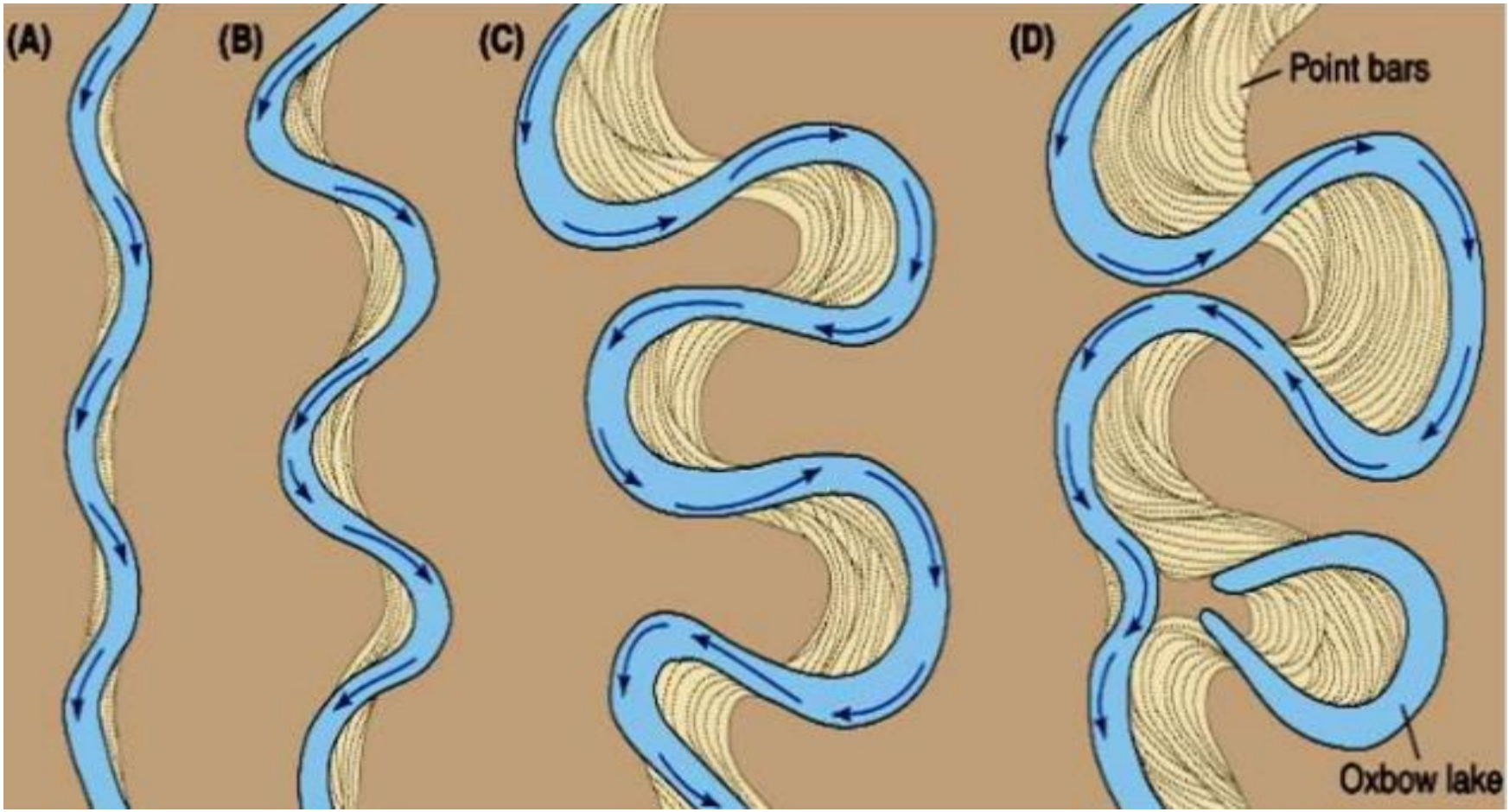
KEY

- Land lost to the river (eroded)
- New land gained from the river (deposited)
- Fastest current
- Lateral Erosion
- Depostition
- Collapsed section of river cliff

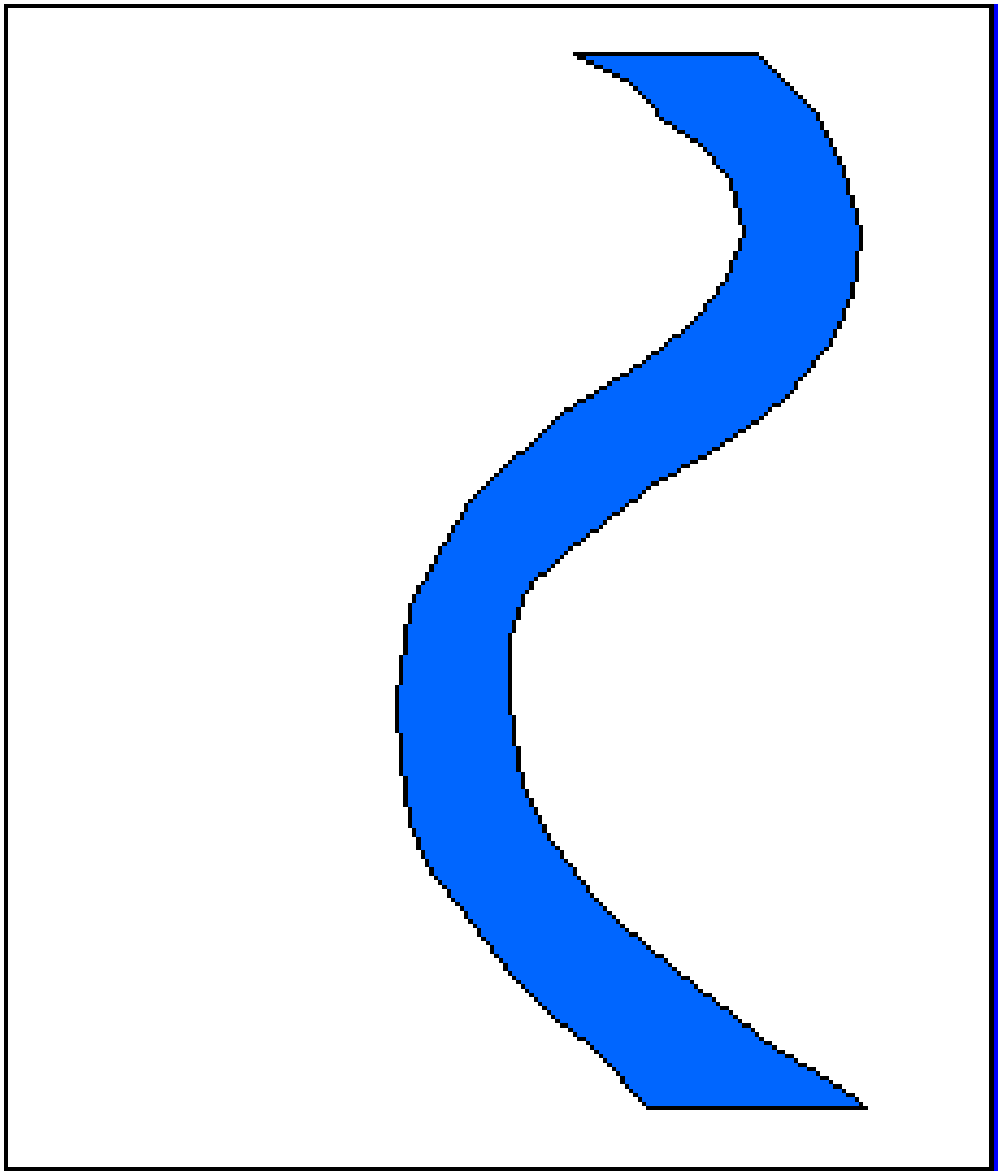
EVOLUCIÓN DUN MEANDRO



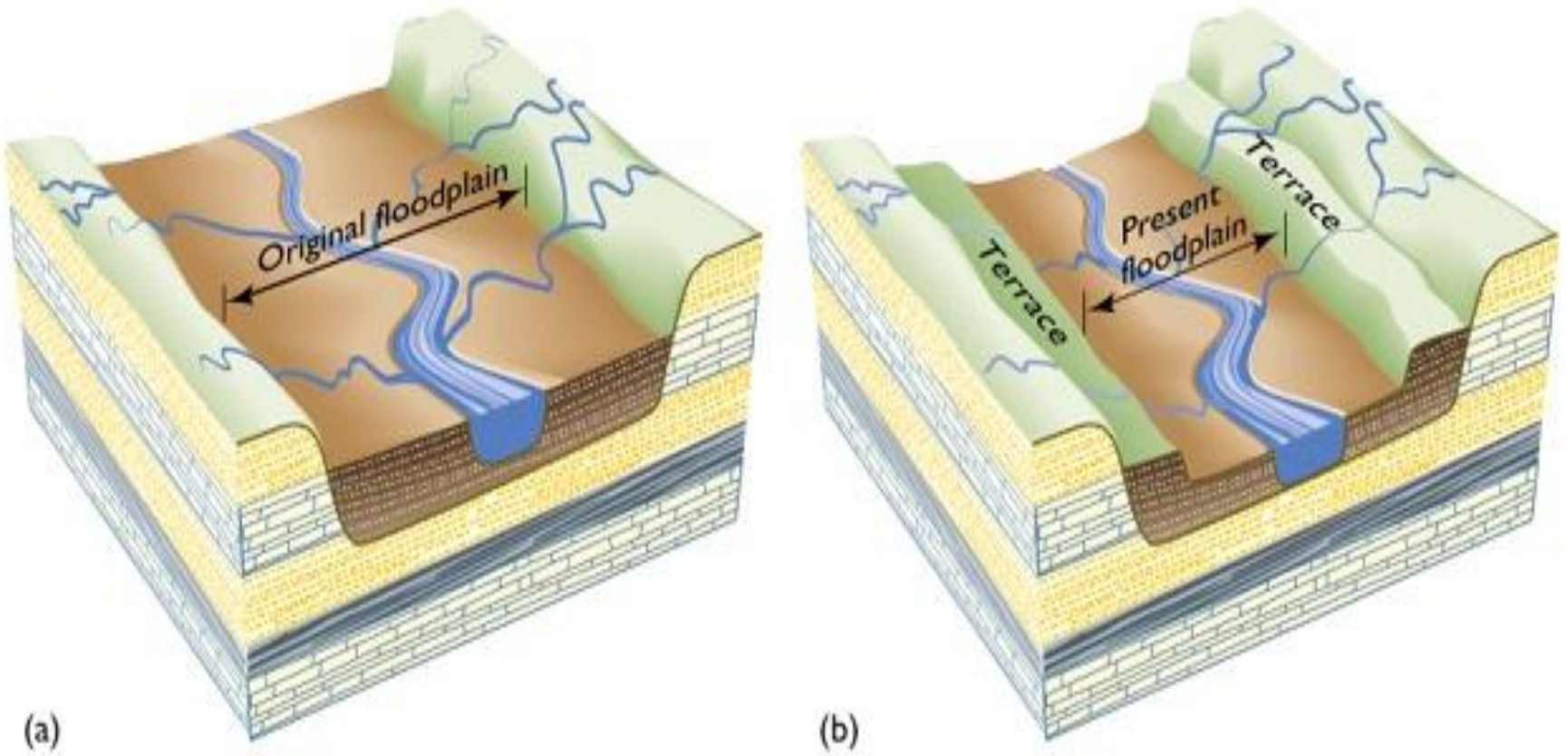
MEANDROS



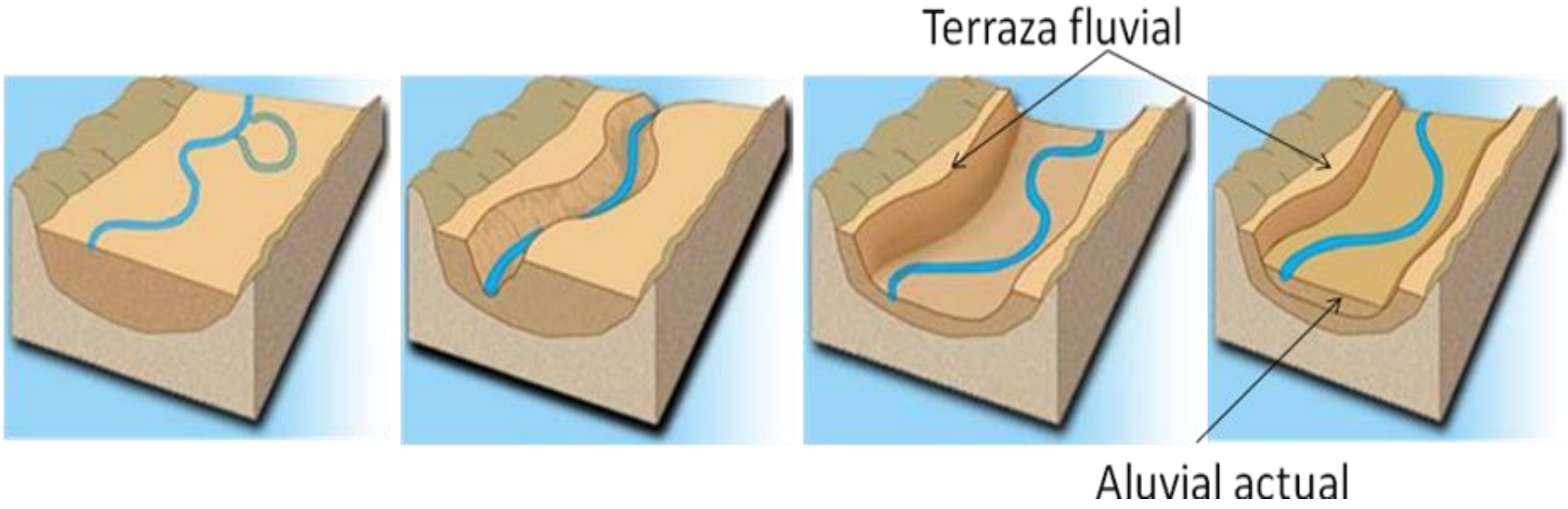
MENDRO ABANDONADO



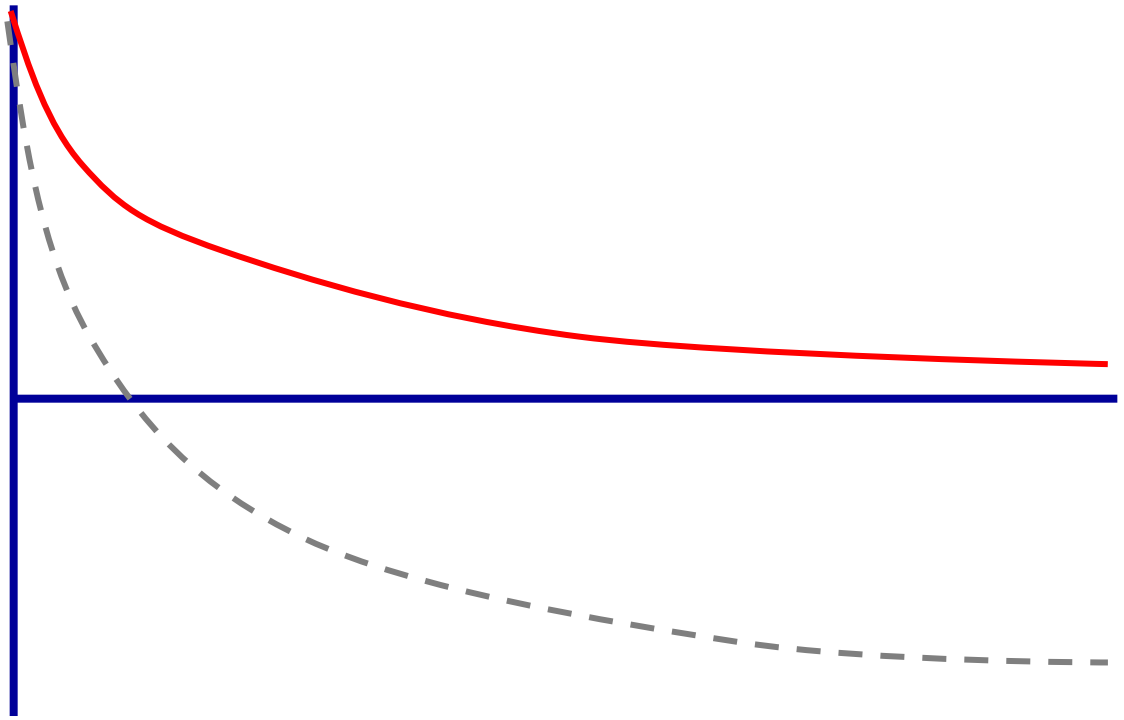
AS TERRAZAS FLUVIAIS

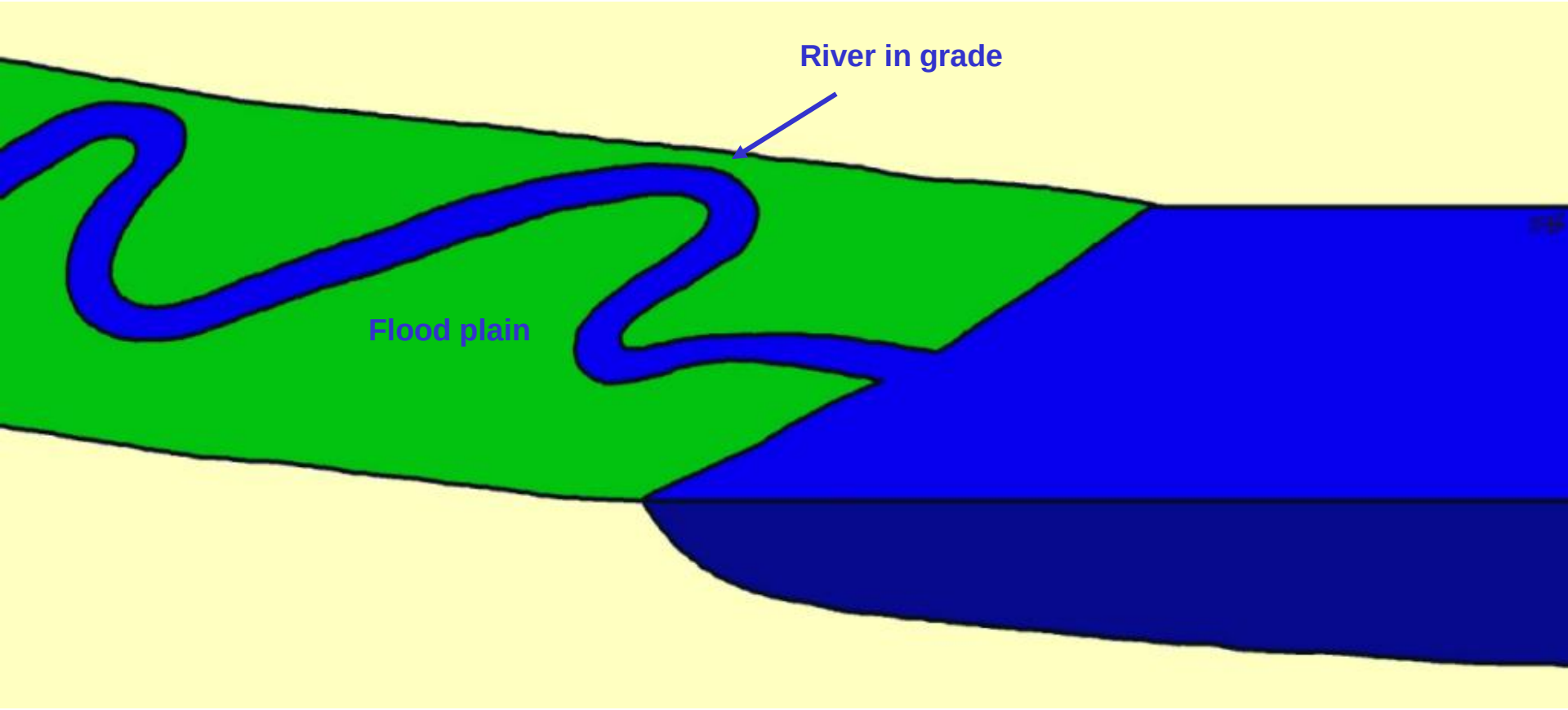


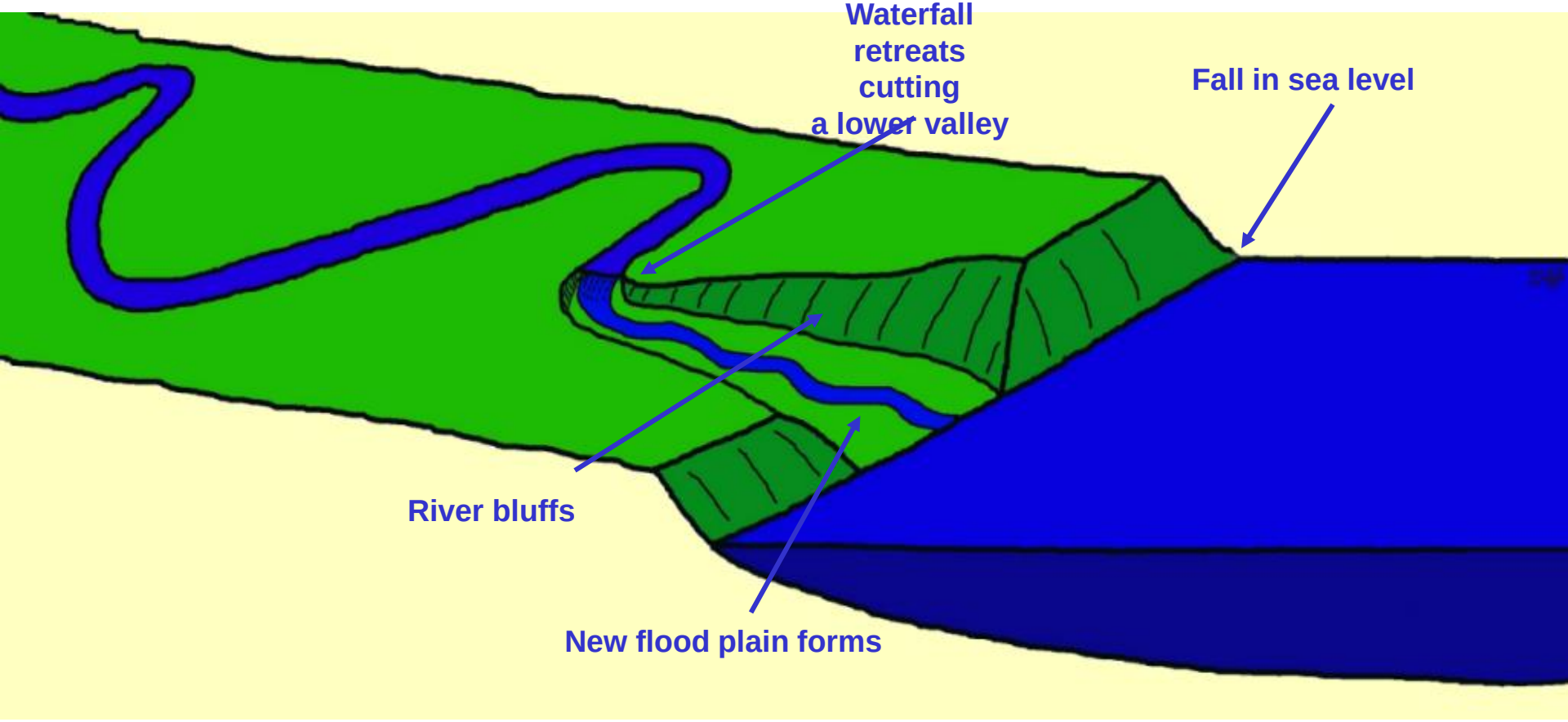
AS TERRAZAS FLUVIAIS

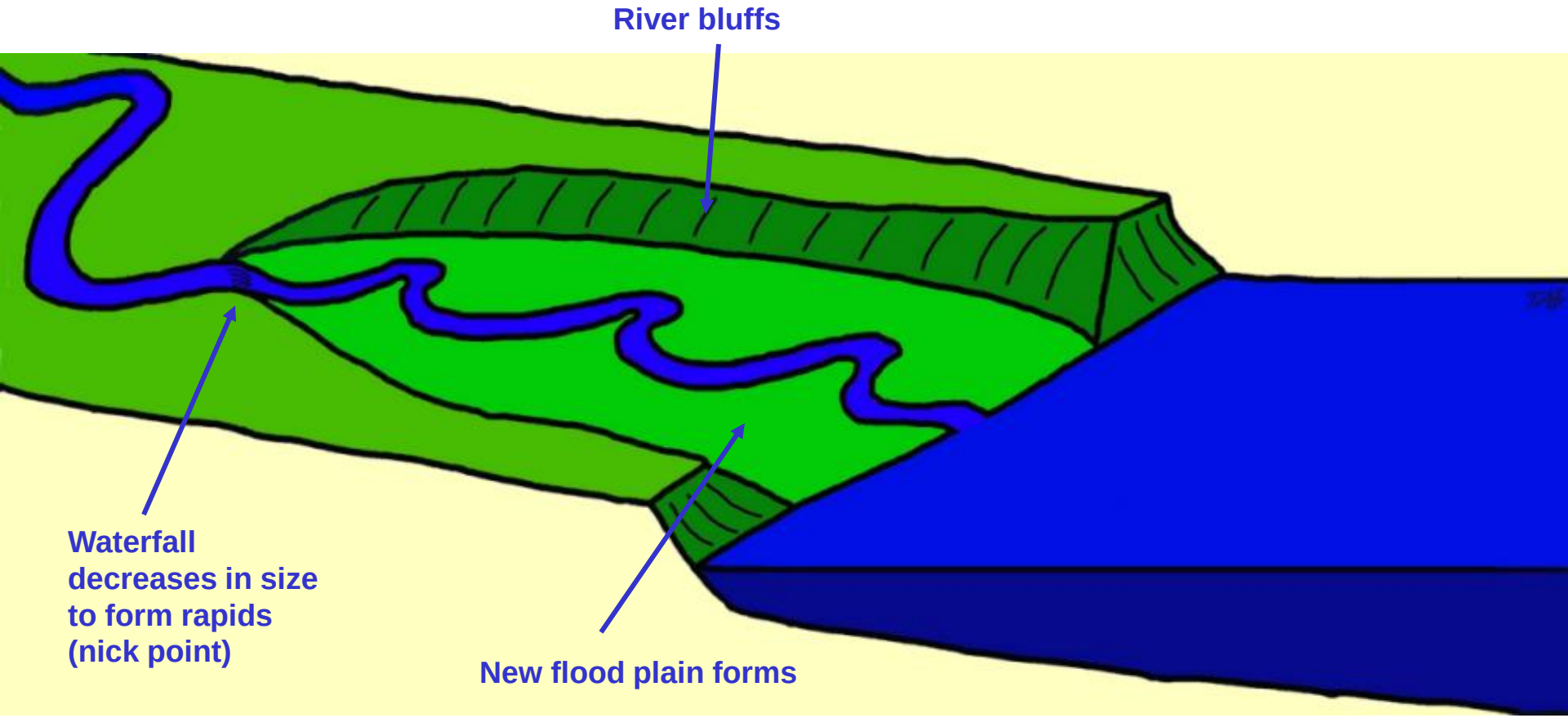


DIMINUCIÓN NIVEL DO MAR ?

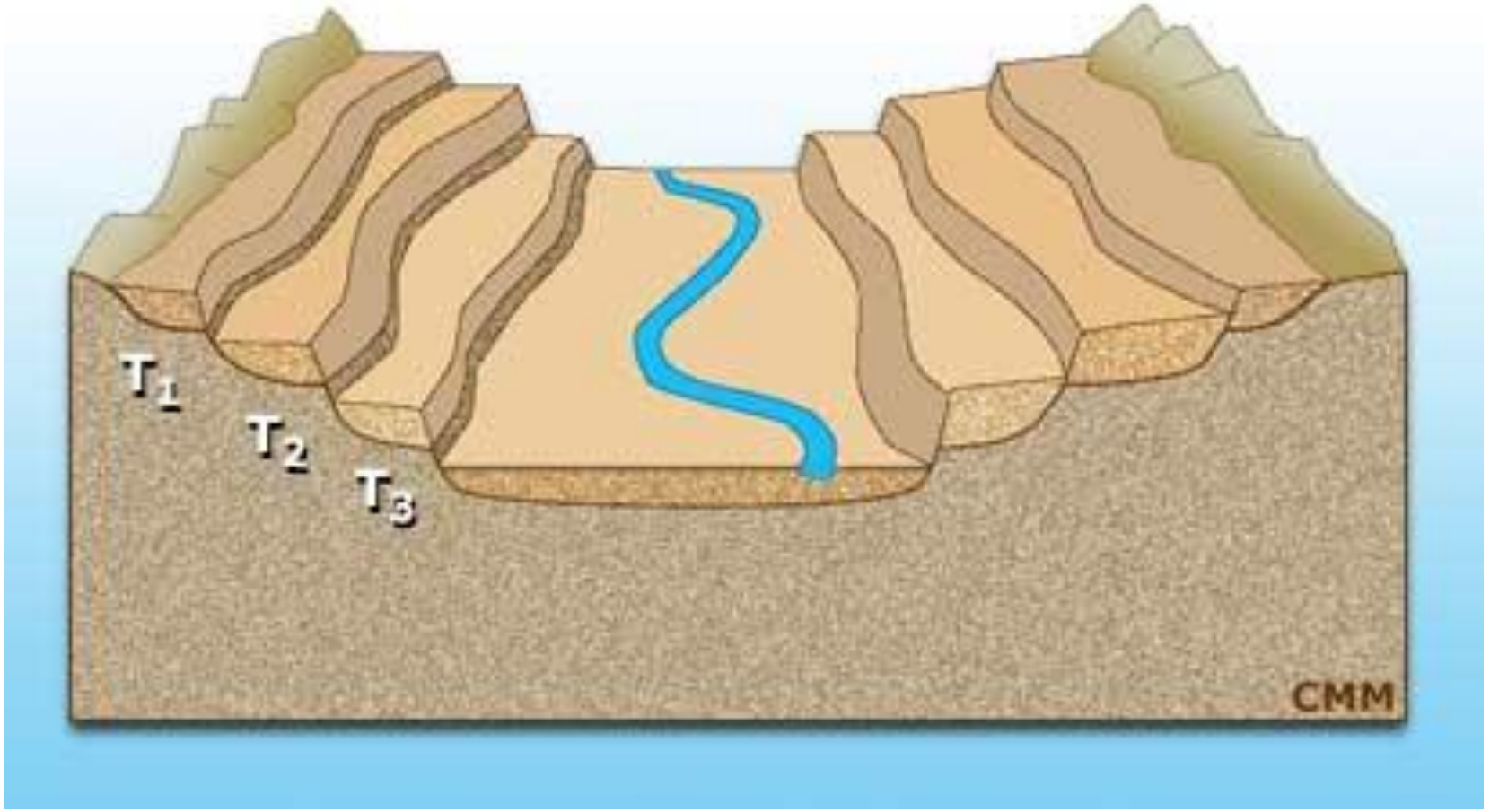



River in grade
Flood plain

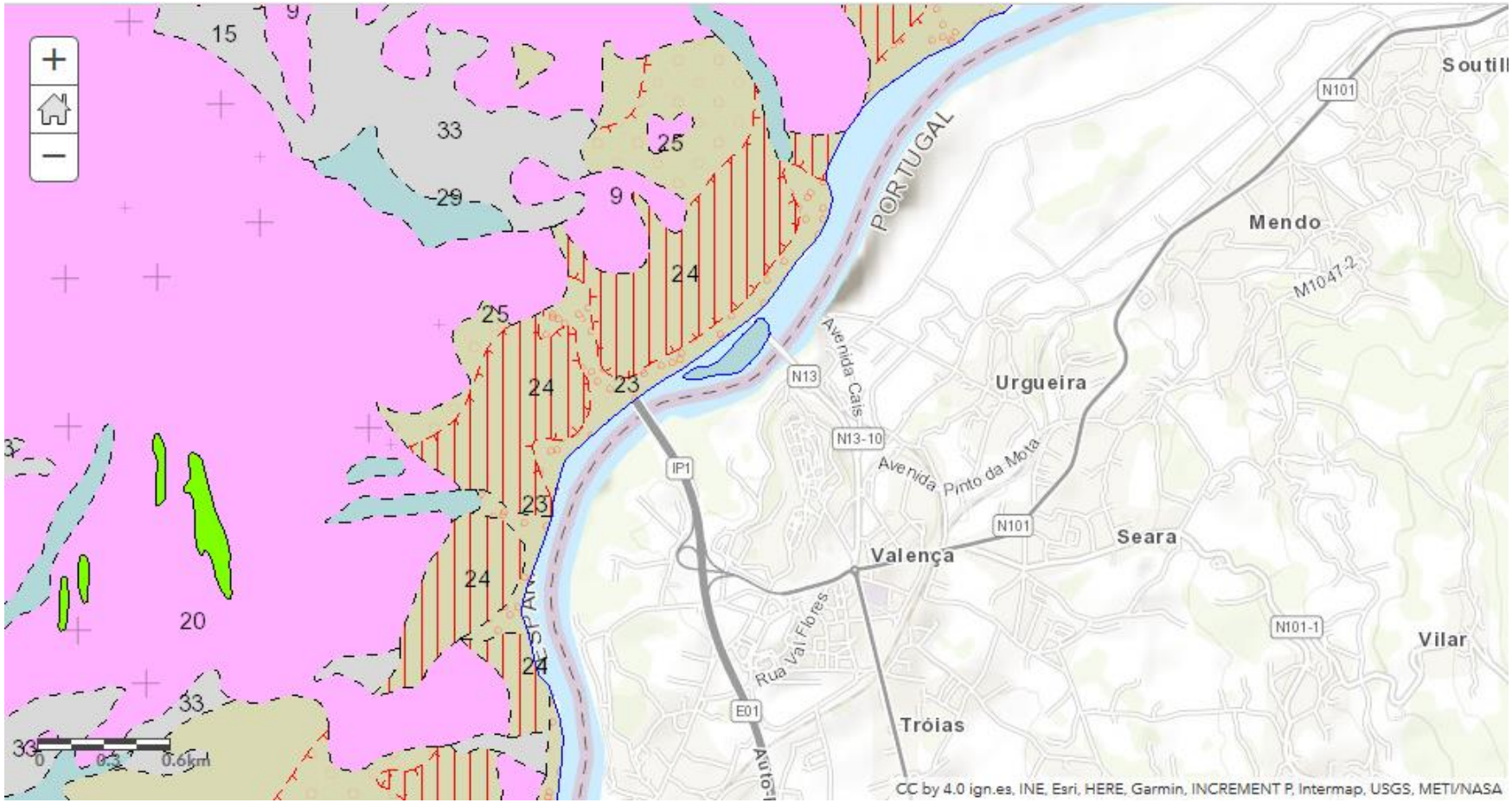

Waterfall
retreats
cutting
a lower valley
Fall in sea level
River bluffs
New flood plain forms

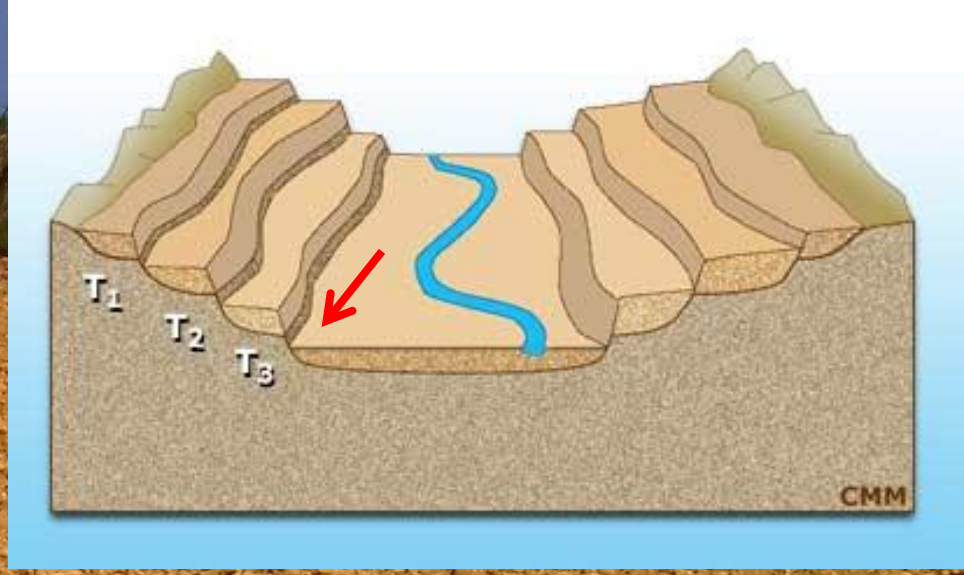

River bluffs
Waterfall
decreases in size
to form rapids
(nick point)
New flood plain forms

Conxunto de terrazas que amosan depositación e erosión nun sistema de canal ou río

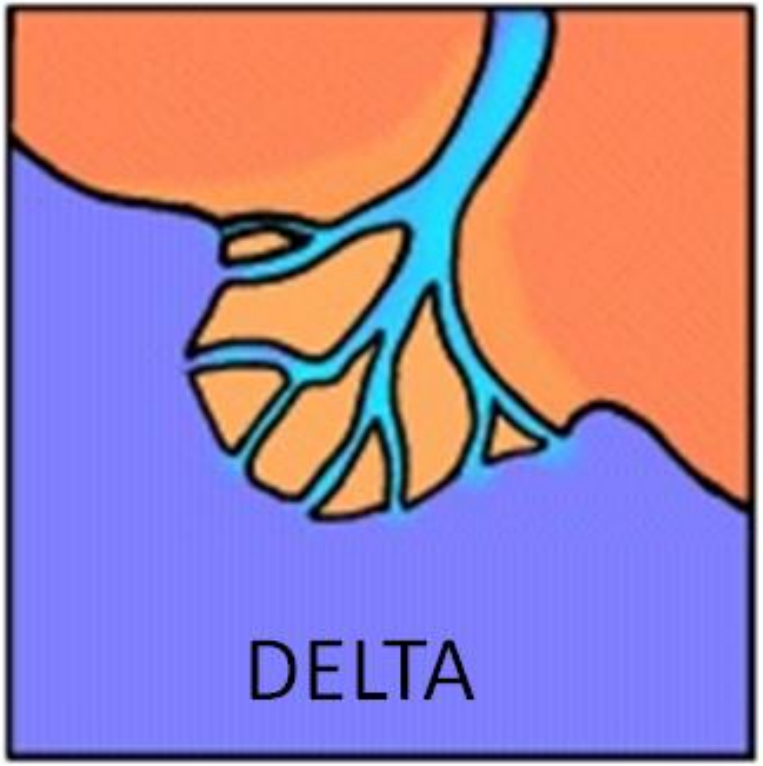


TERRAZAS DO RÍO MIÑO




T1
T2
T3
CMM

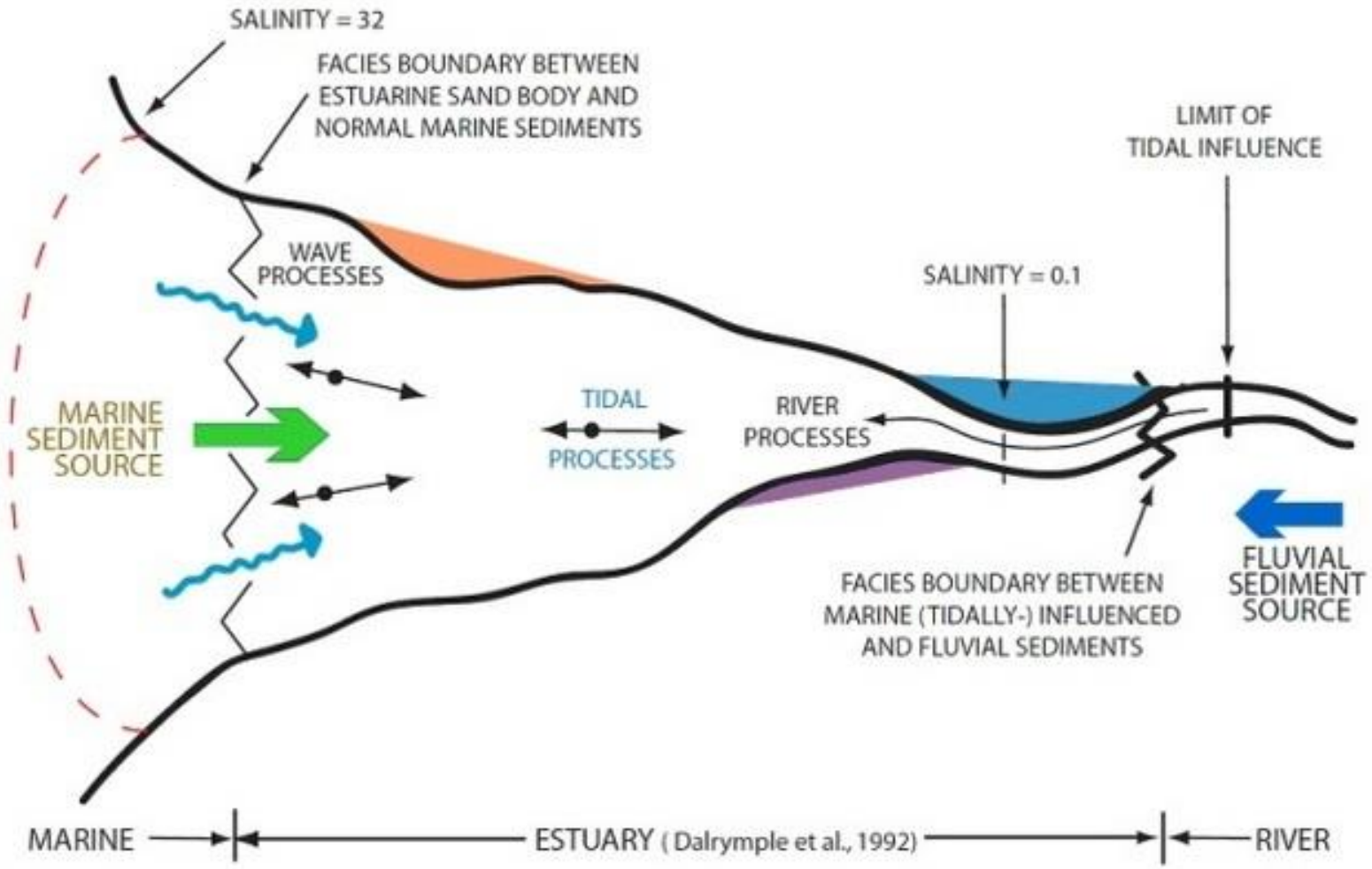
DESEMBOCADURA DOS RÍOS



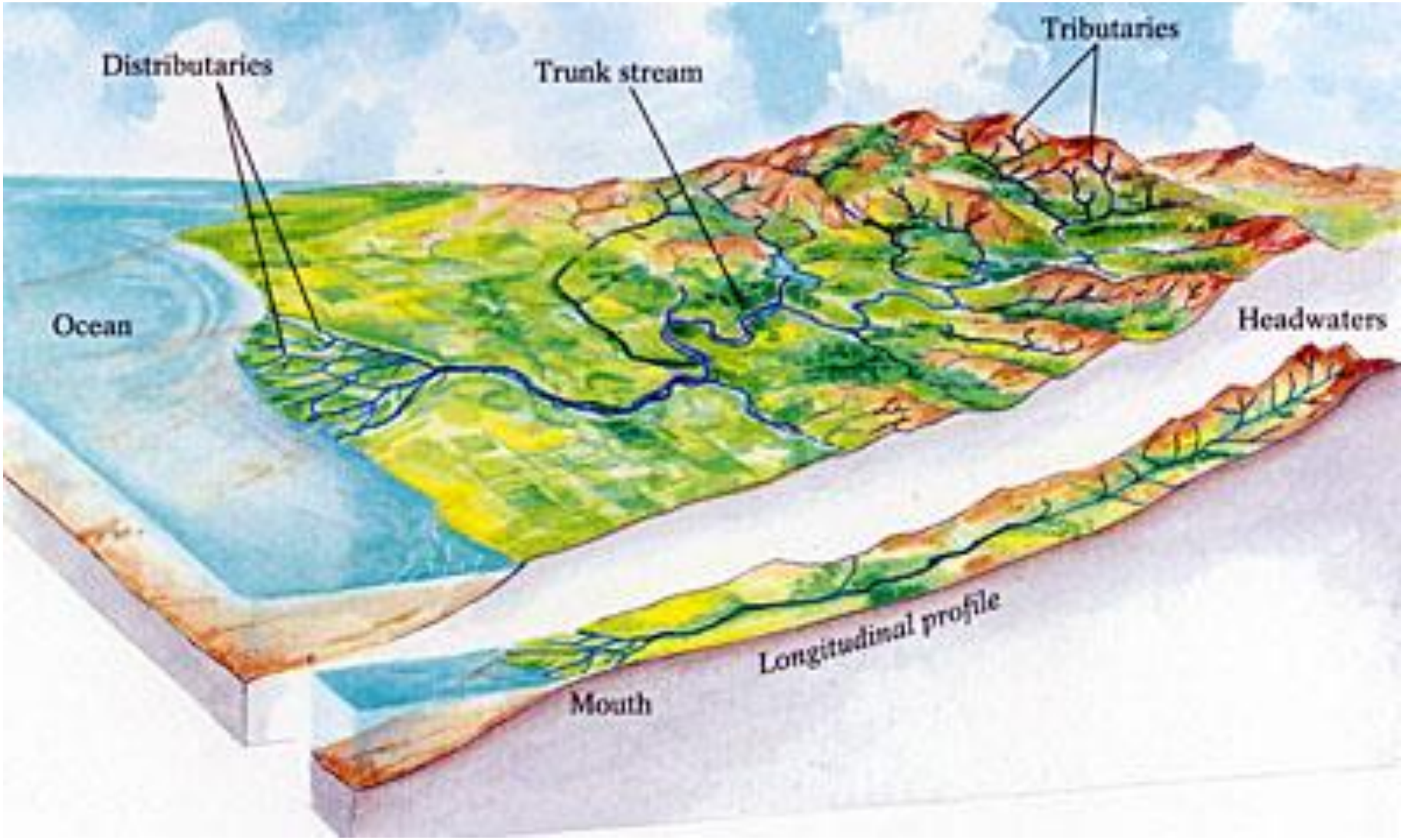
ESTEIROS OU ESTUARIOS

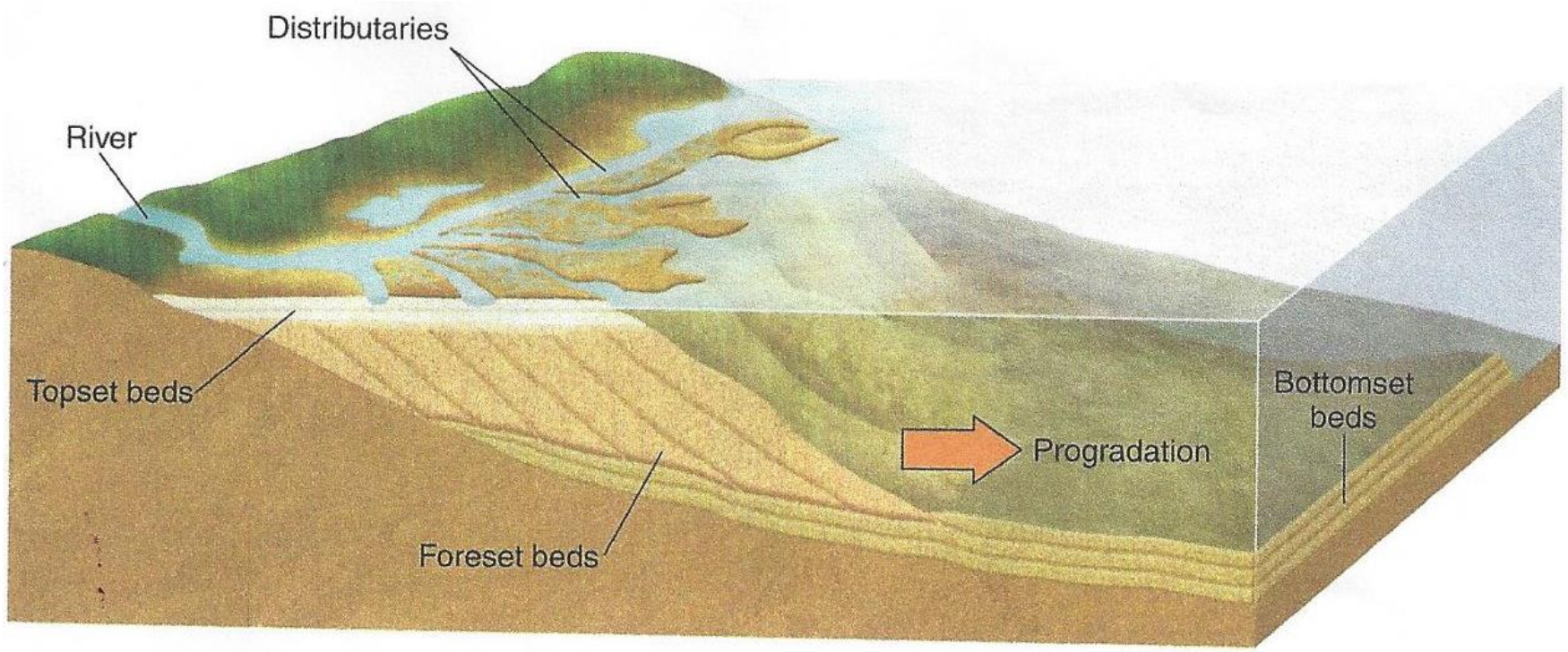
ESTEIRO DO MIÑO

MESTURA DE SEDIMENTOS INFLUENCIA DAS MAREAS



DELTAS


Distributaries
Trunk stream
Tributaries
Ocean
Headwaters
Longitudinal profile
Mouth



MOITOS TIPOS

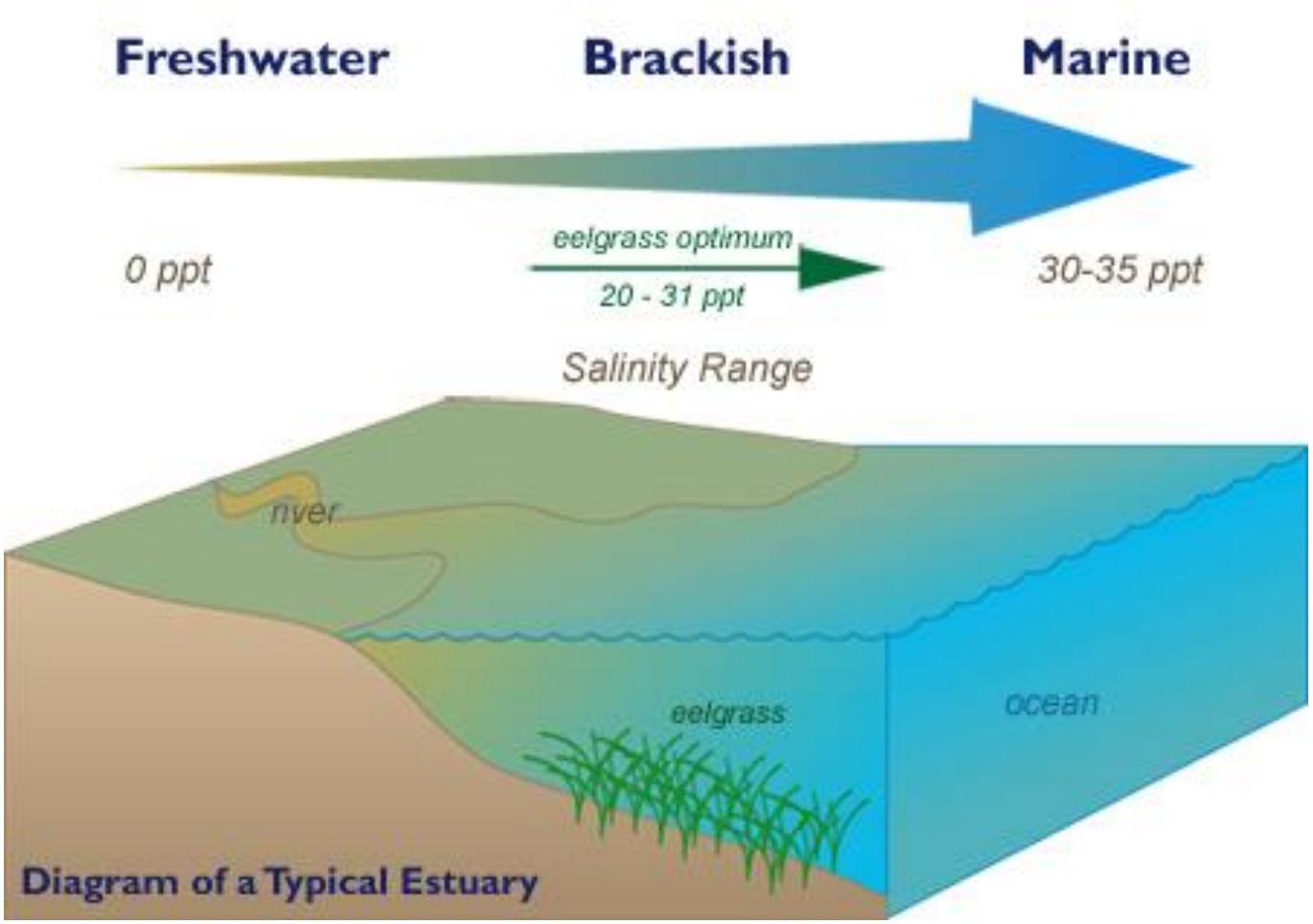
DELTA DO MISSISIPI


DELTA DO EBRO


DELTA DO NILO

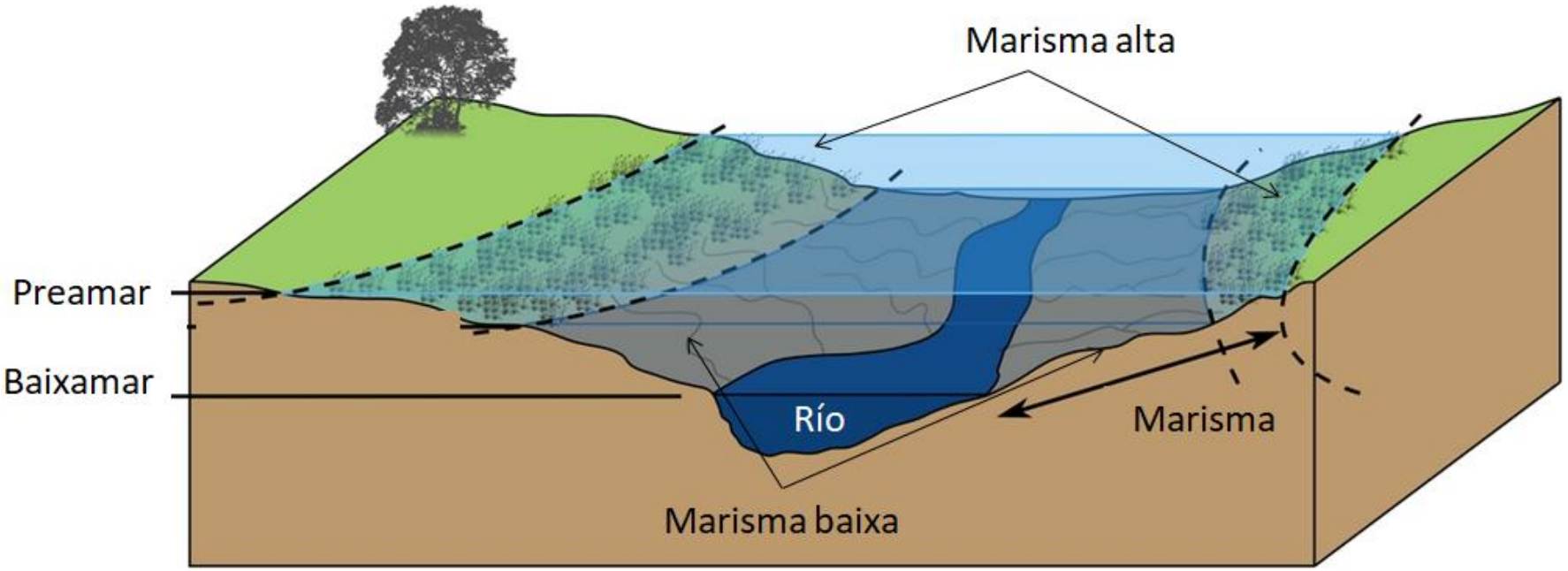

Volgograd
Don
Volga
Ural
Atyrau
Kazakhstan
Astrakhan
Russia
Aral
Sea
Aqtau
Uzbekistan
Makhachkala

DESENVOLVEMENTO DE MARISMAS

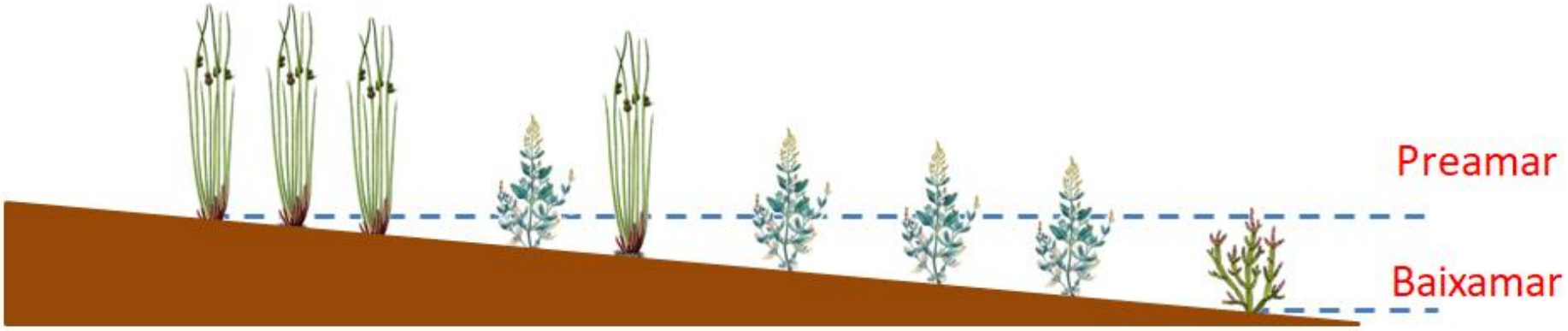


XUNQUEIRA DO LAGARES

MARISMA



Vexetación da marisma

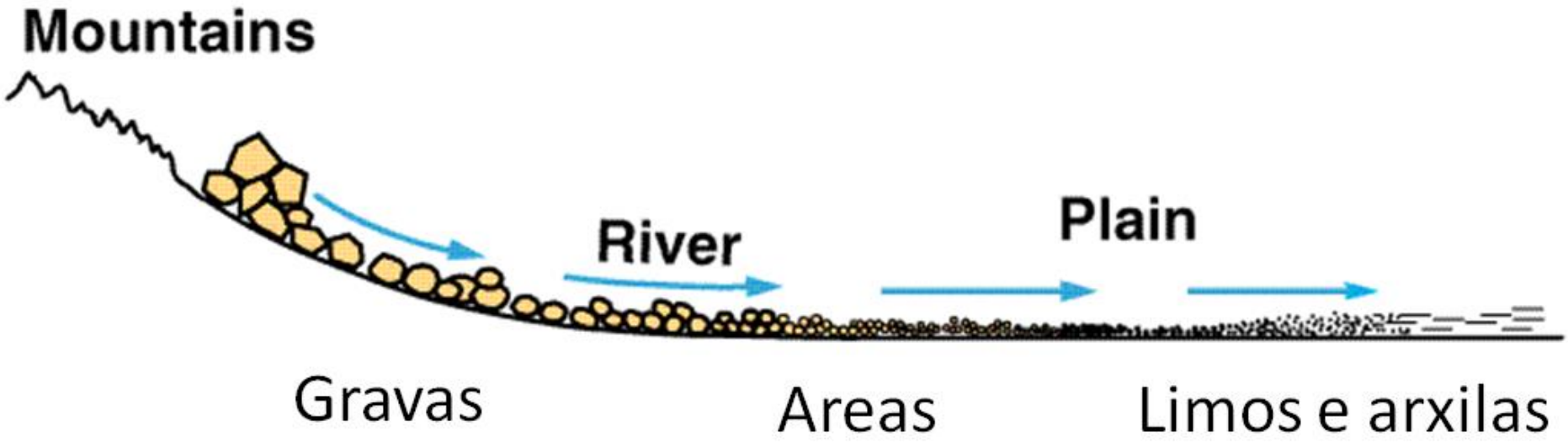


Juncus maritimus

Halimione portulacoides

Salicornia

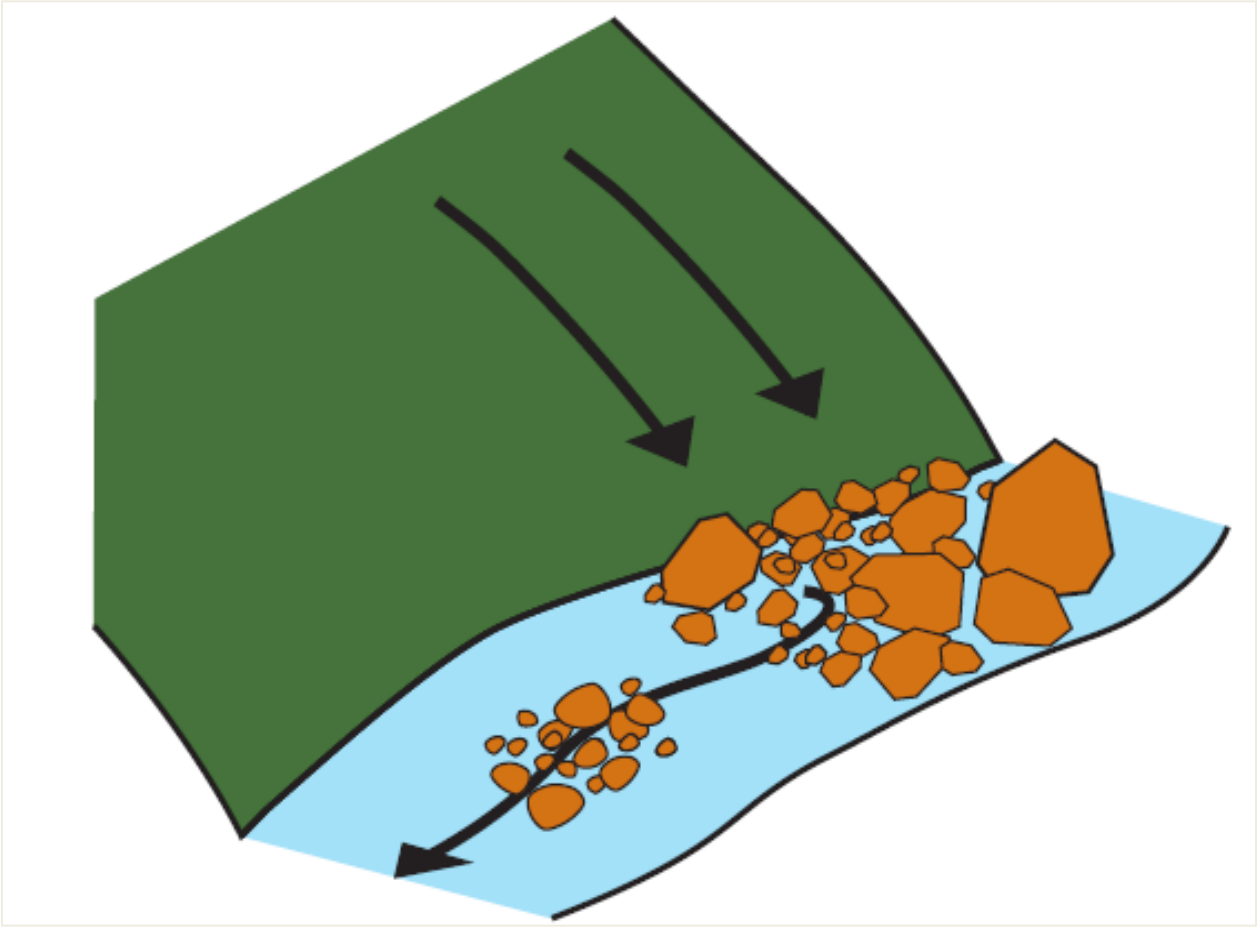
SEDIMENTOS FLUVIAIS: ALUVIÓNS



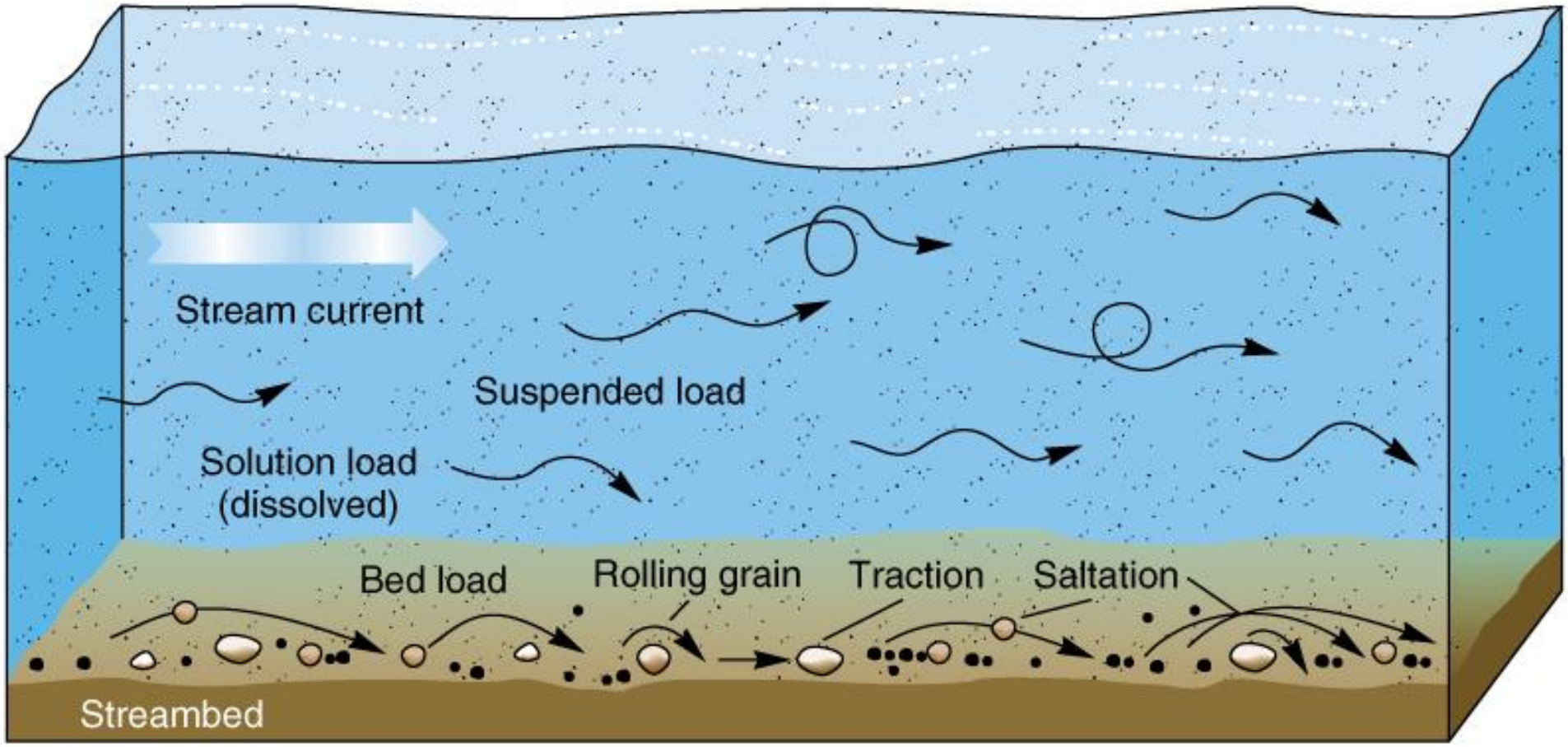
Perda gradual da capacidade de transporte.

Redondeamento e clasificación.

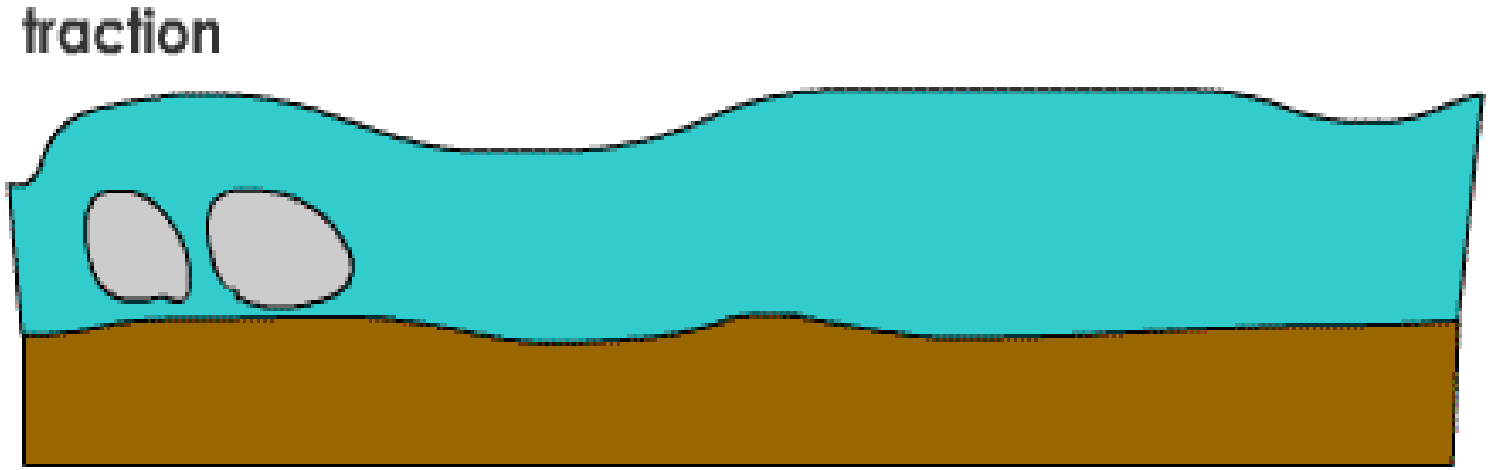
TRANSPORTE DA CARGA



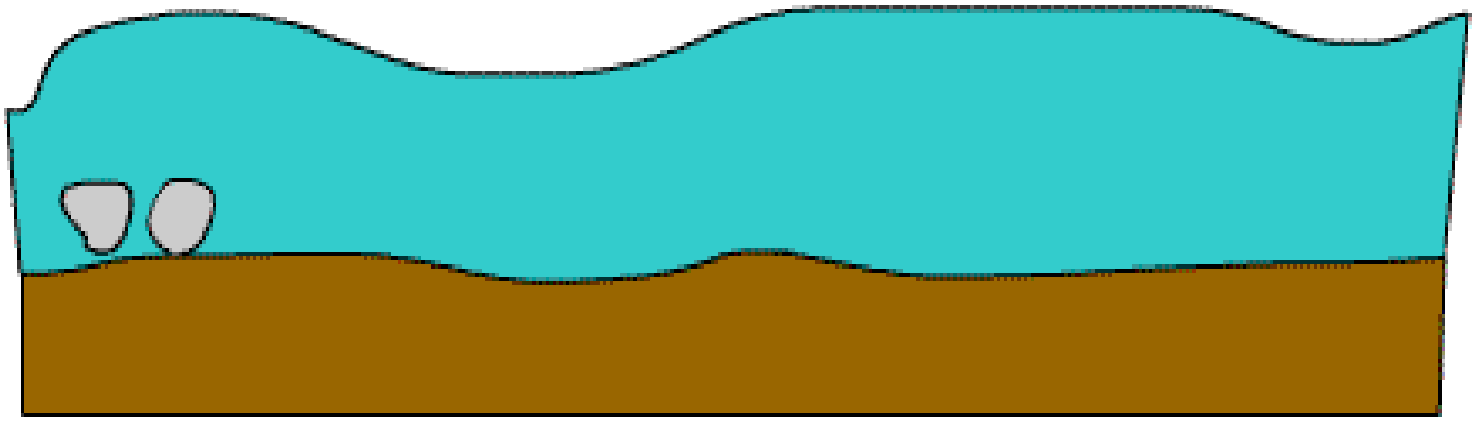
Carga de fondo
Suspensión
Disolución



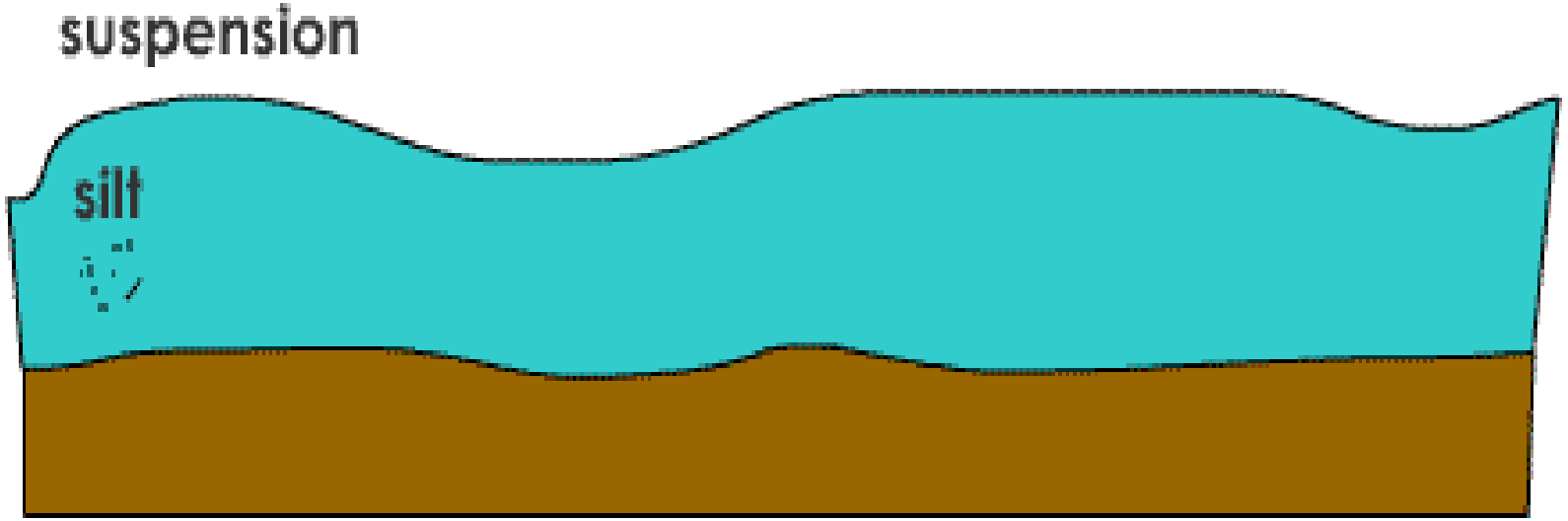
Redondeamento



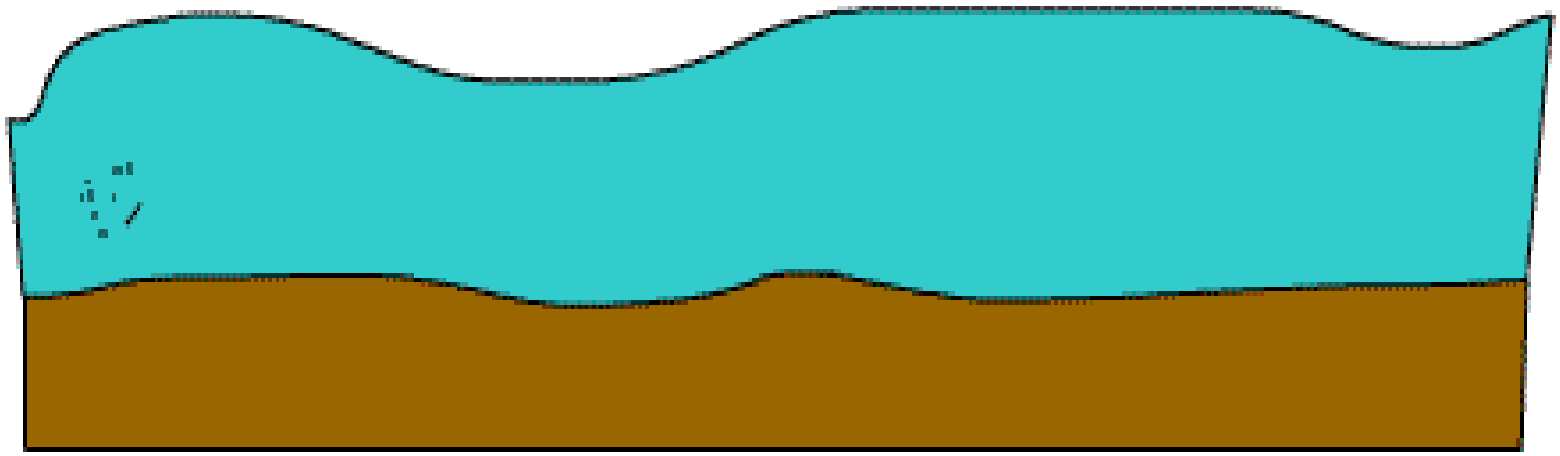
saltation



Suspensión



Disolución

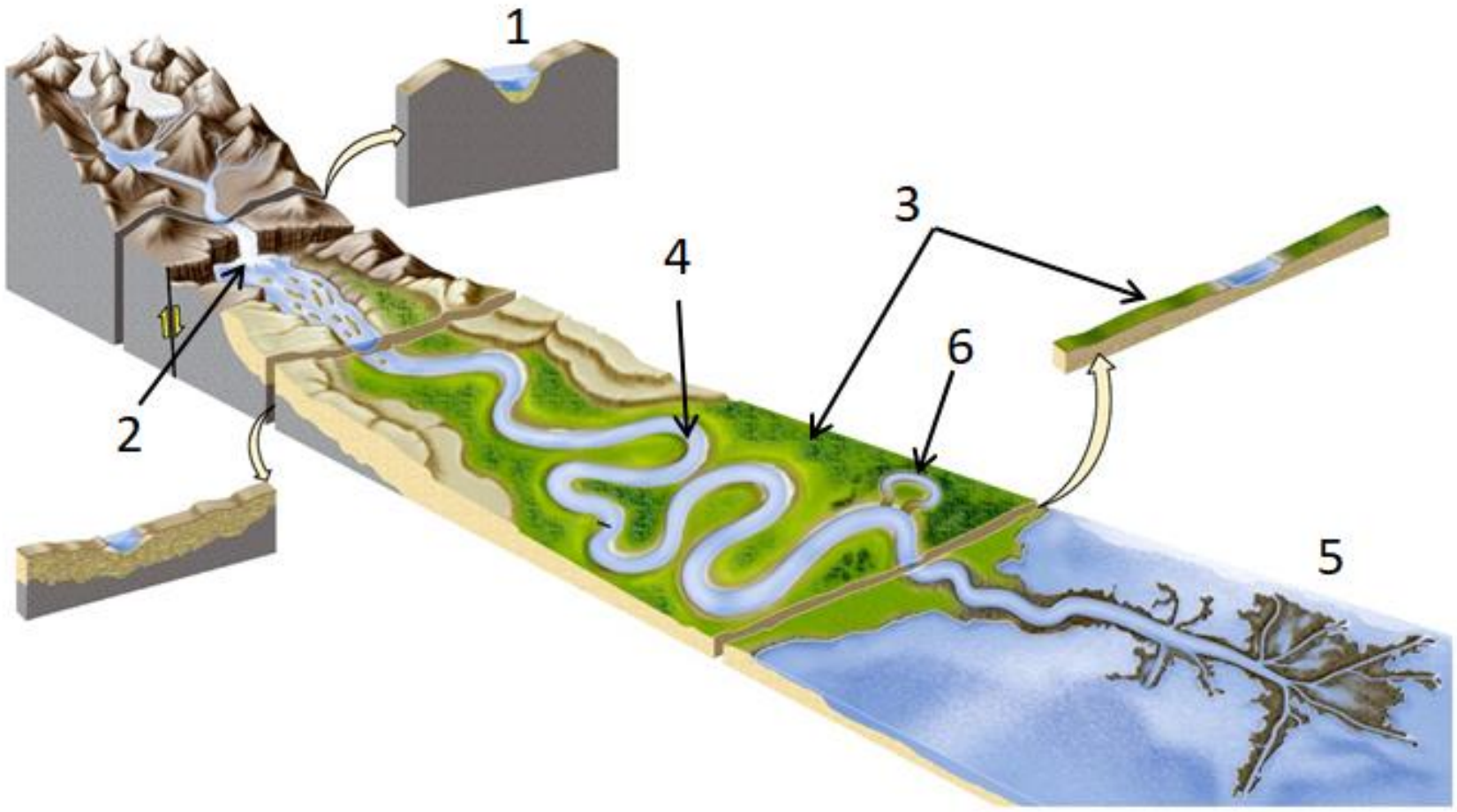



ELEVADO GRAO DE MADUREZ TEXTURAL

RUBEFACCIÓN

Precipitación de óxidos de ferro

EXERCICIO 1



AMPLIACIÓN: RIADAS E INUNDACIÓNS