

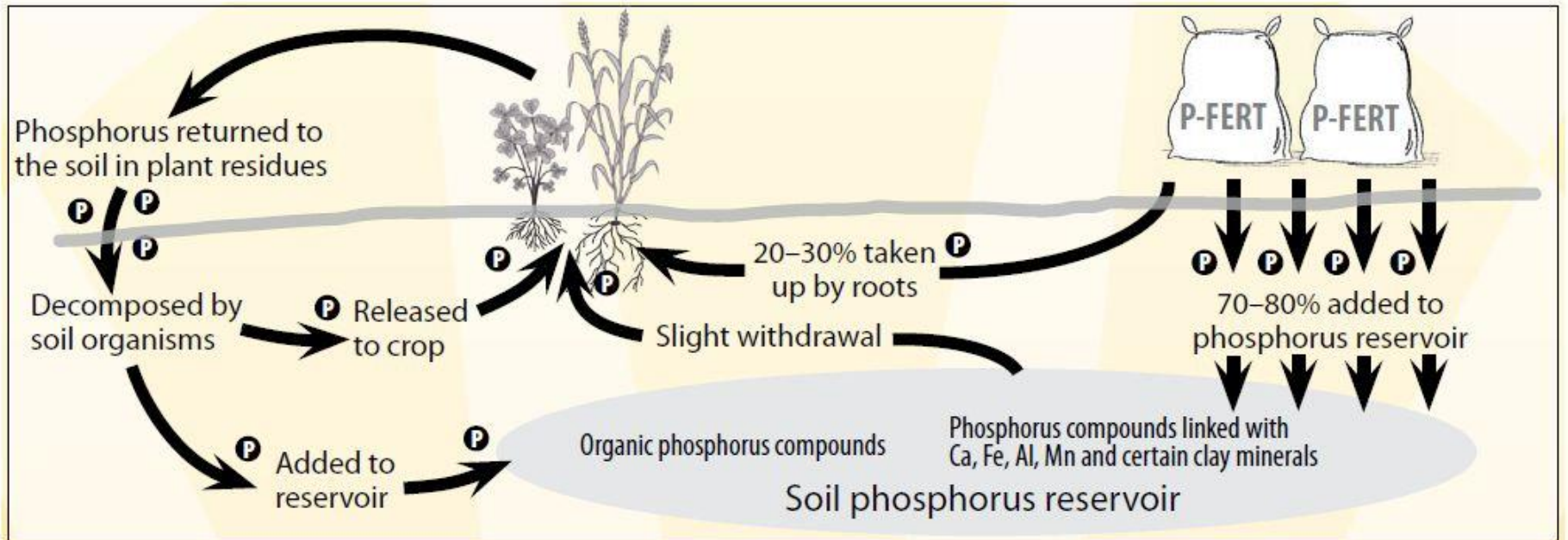


ZERO WASTE IRELAND

If we don't recycle phosphorus safely
from waste water and from waste food
soon we eventually go hungry

Phosphorus in Fertilizer





Phosphorus is now mined from Rock

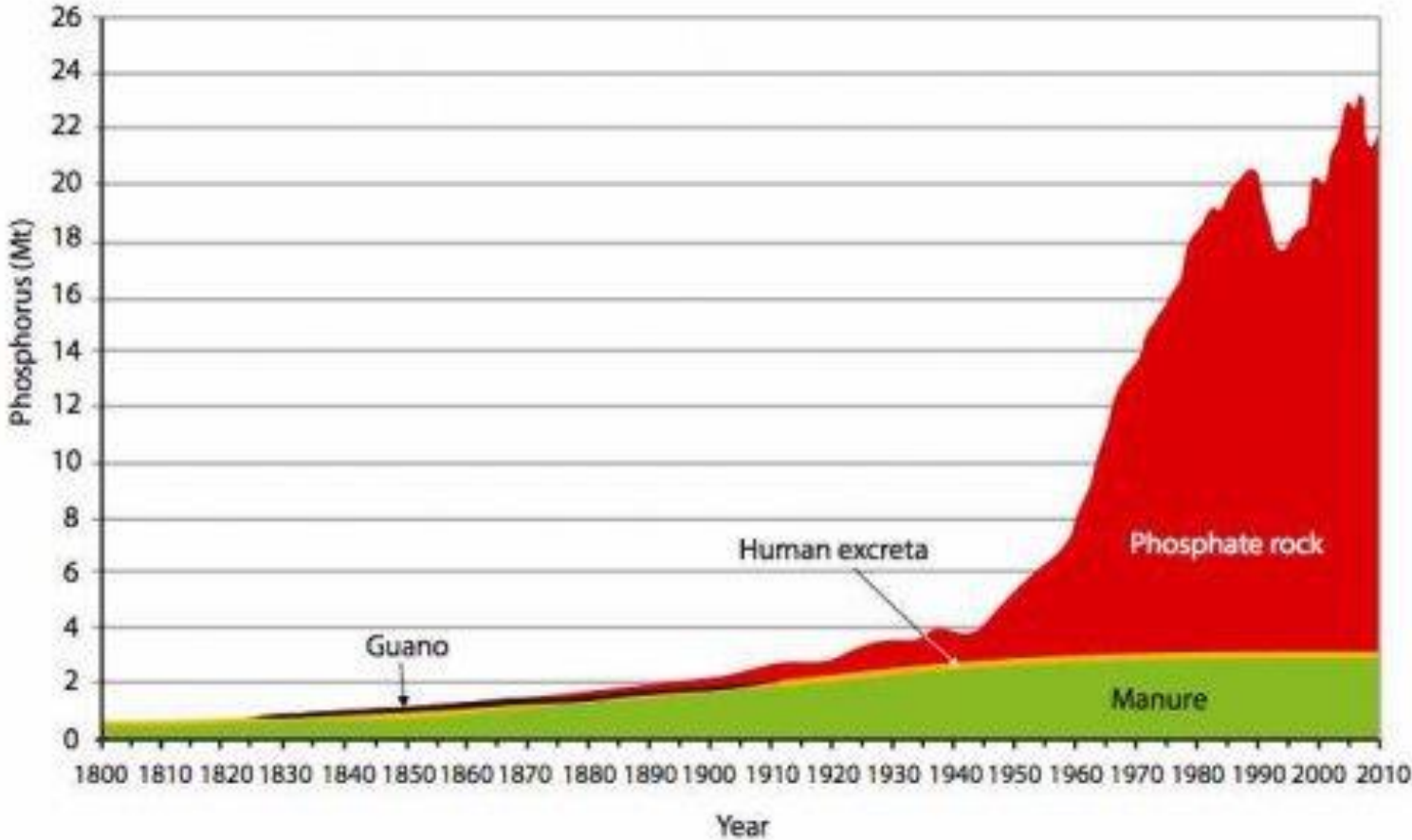
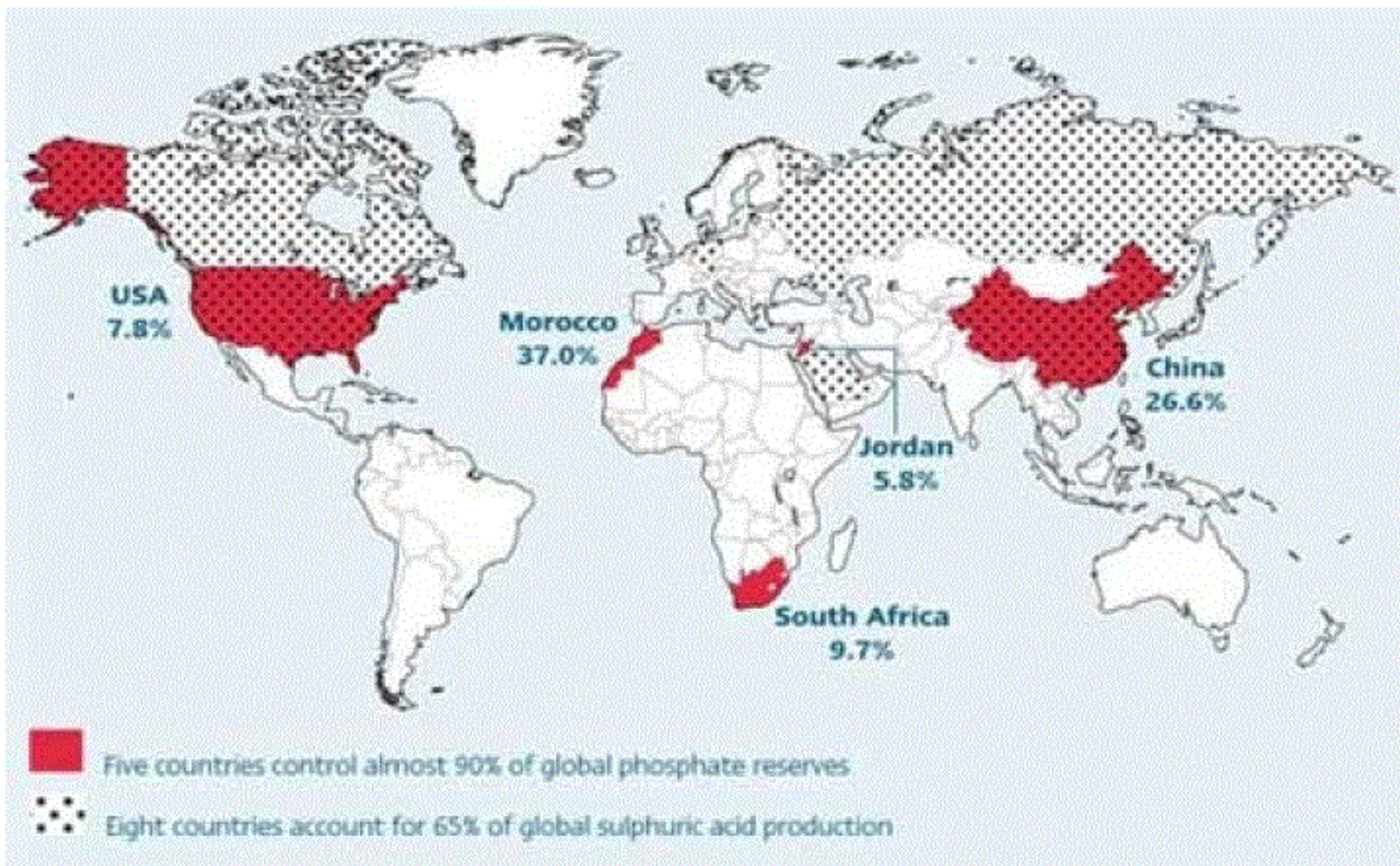
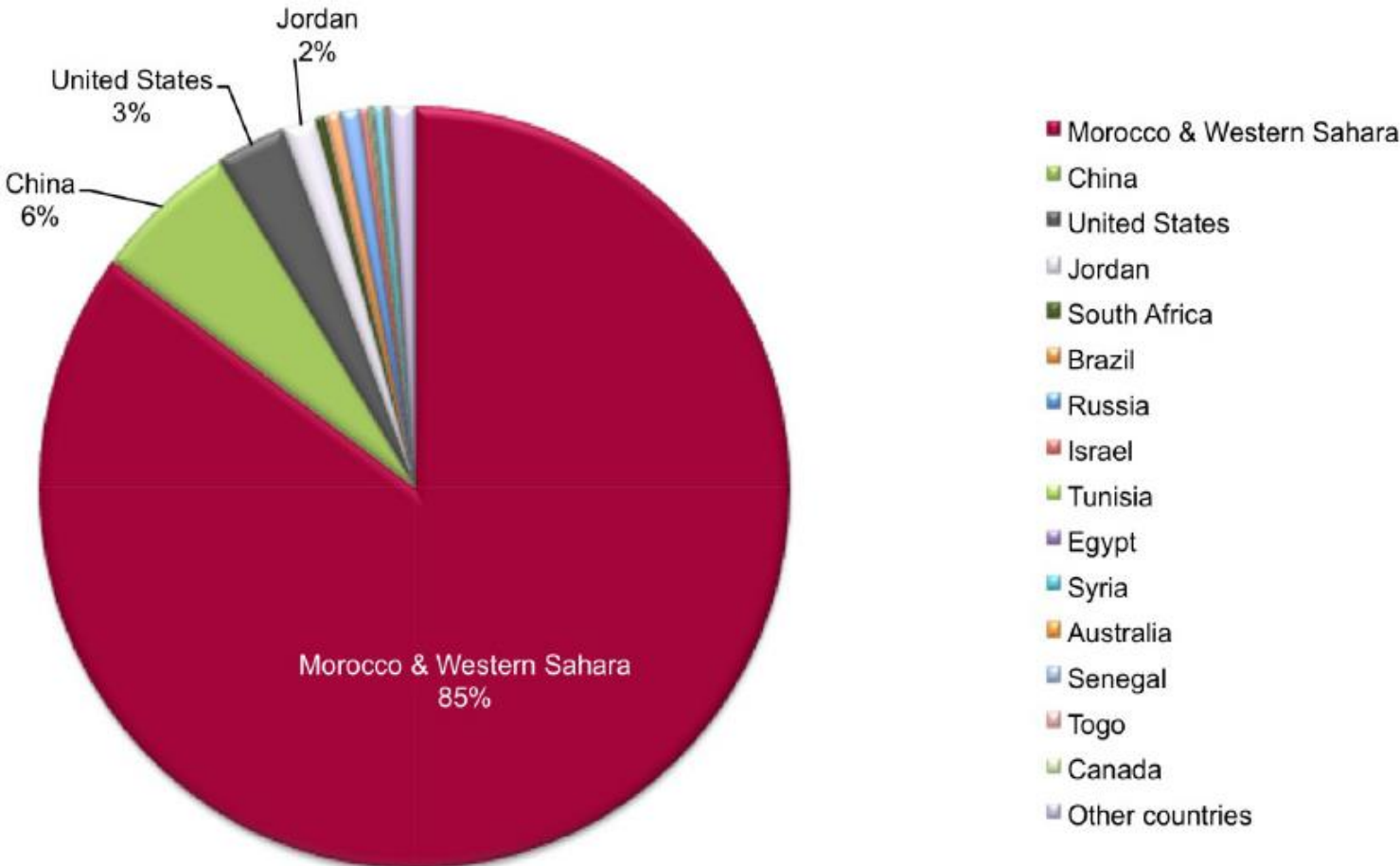


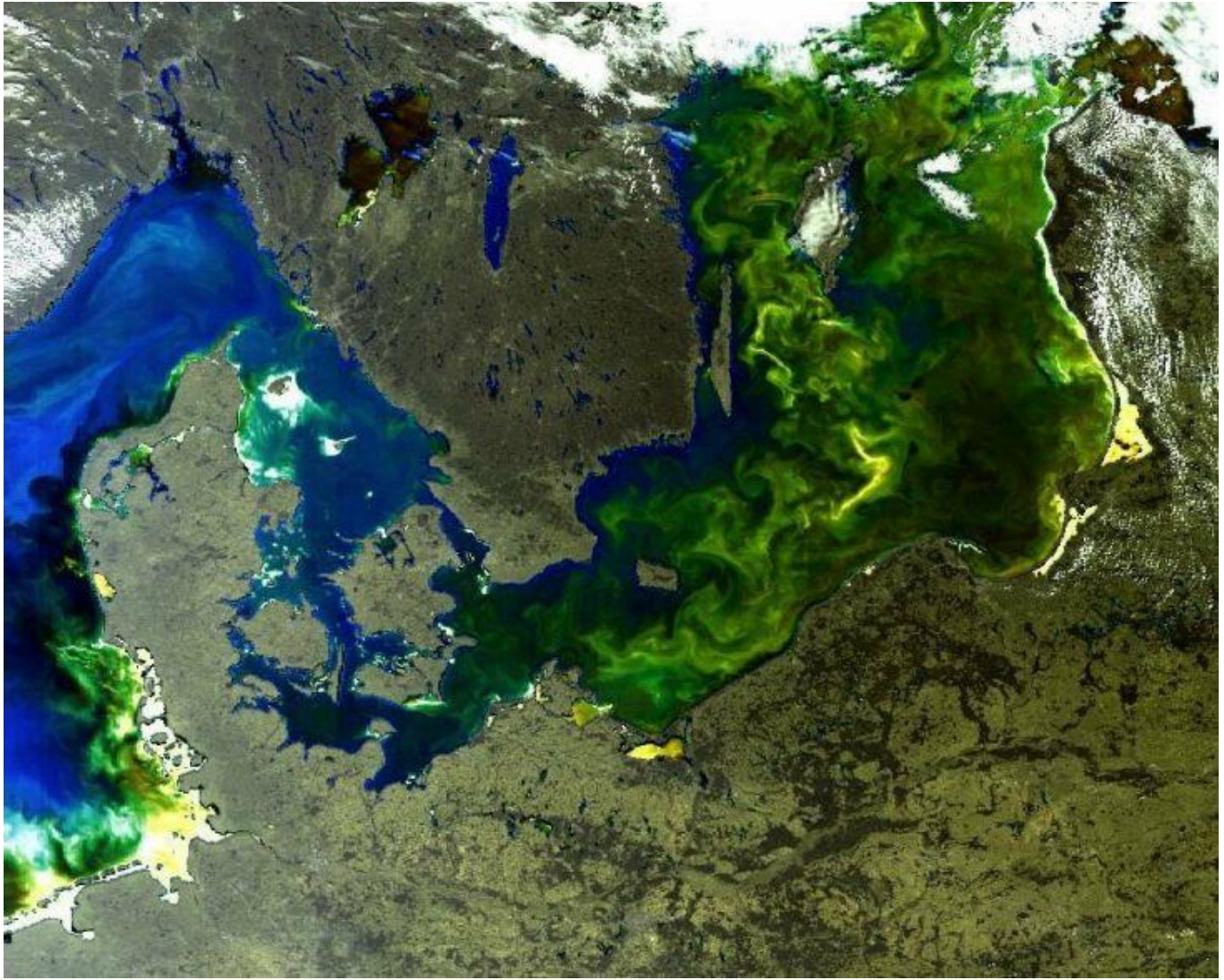
Figure 2: Global sources of phosphorus fertilizer. Since the mid-1940s, population growth accompanied by greater food demand and urbanization have led to a dramatic increase in the use of mined phosphate rock compared with other sources of phosphorus. Source: Cordell et al. (2009)



The Remaining Countries with Phosphorus Rock













Comhairle Contae An Chláir
Clare County Council

NOTICE

LOUGH DERG WATERS

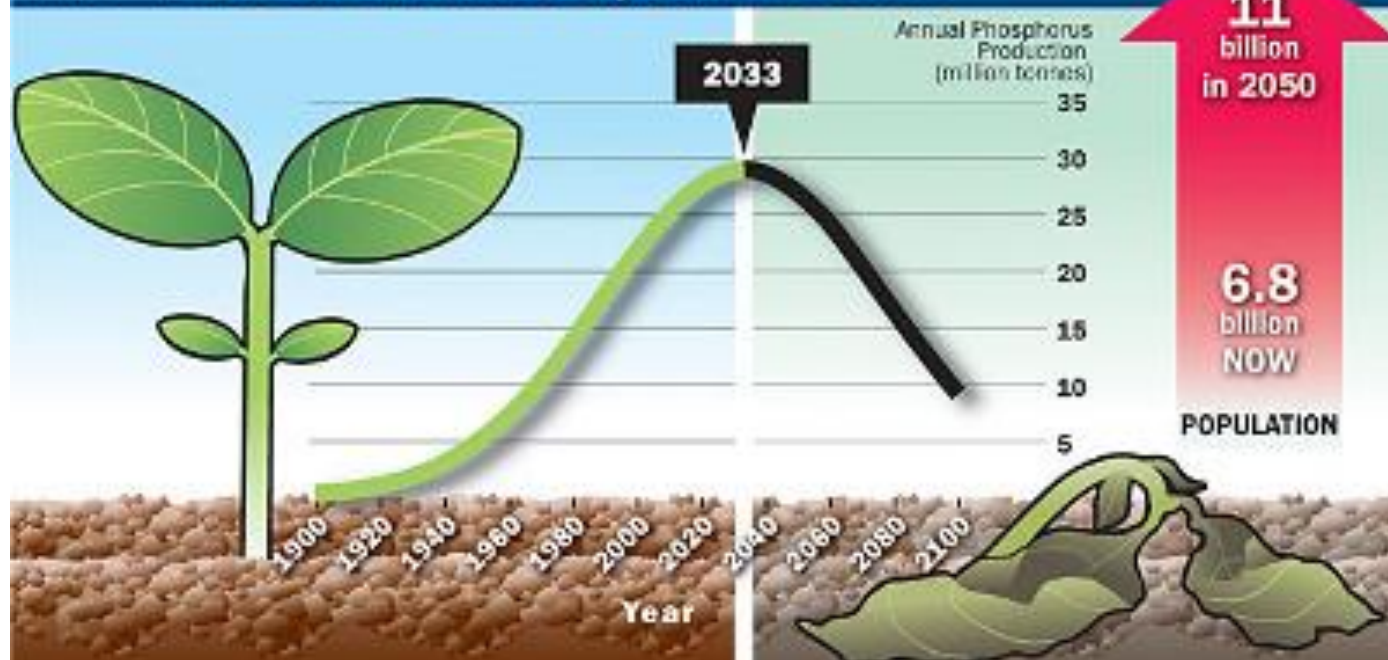
**DURING THIS PERIOD MAY TO SEPTEMBER
AN ALGAL BLOOM OR DARKISH SCUM MAY
APPEAR ON OR CLOSE TO THE SHORELINE**

PLEASE EXERCISE CAUTION

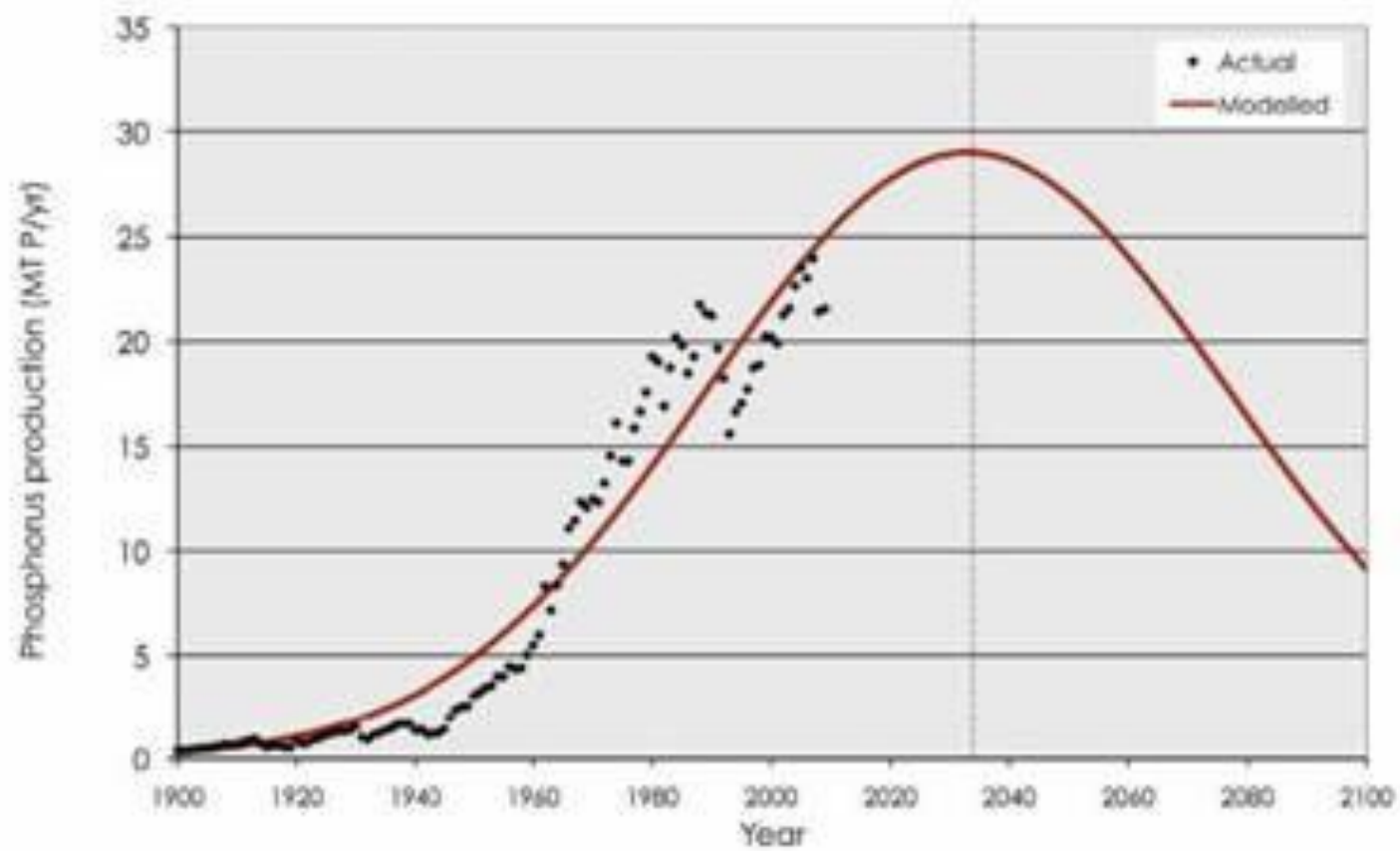
**YOU ARE ADVISED TO AVOID CONTACT WITH
THIS BLOOM / SCUM AS IT MAY CAUSE SKIN IRRITATION
KEEP CHILDREN AWAY FROM THE SHORELINE
KEEP ALL DOGS AWAY FROM THE WATER AND
ANY SHORELINE SCUM**

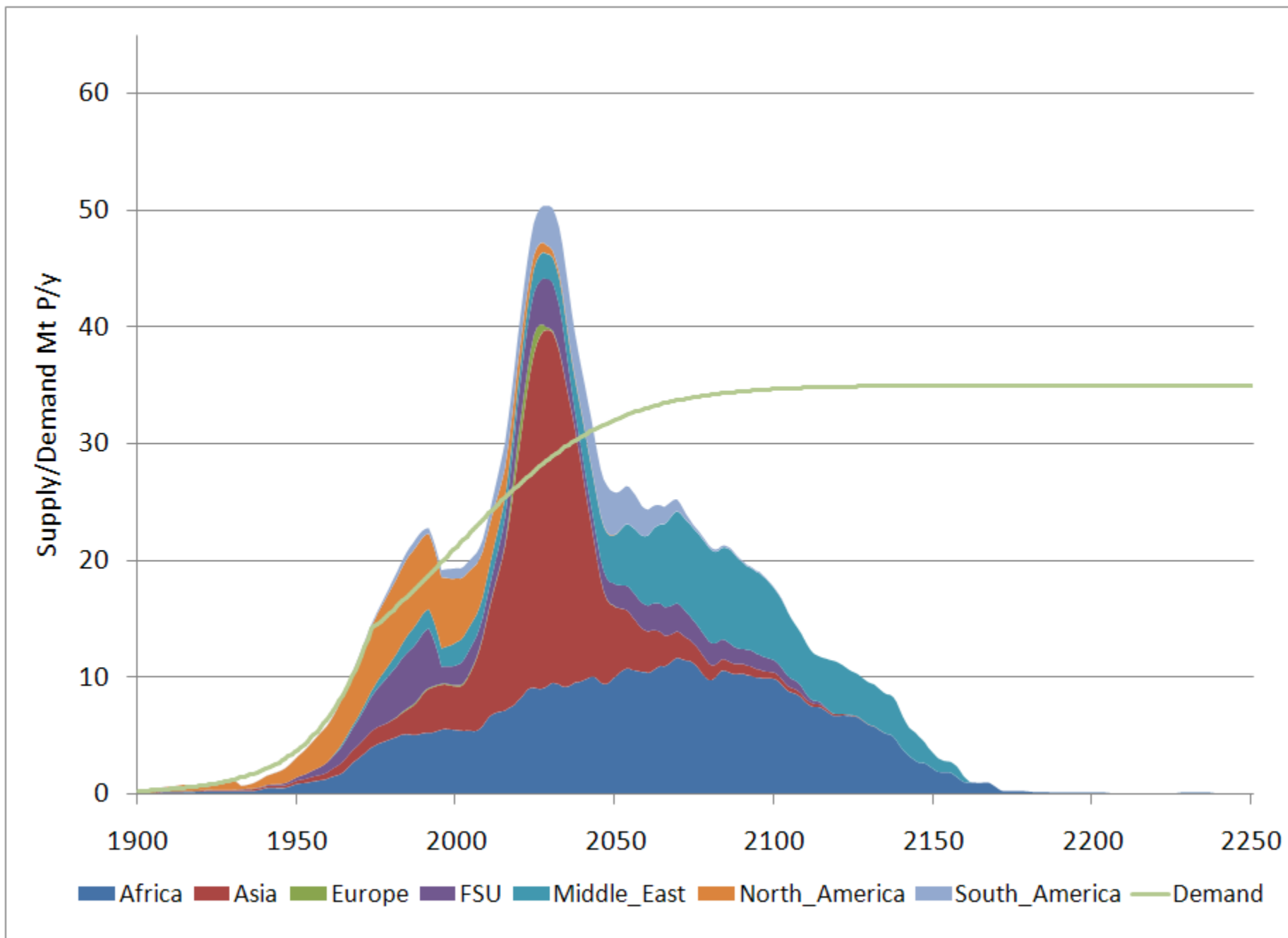
THANK YOU

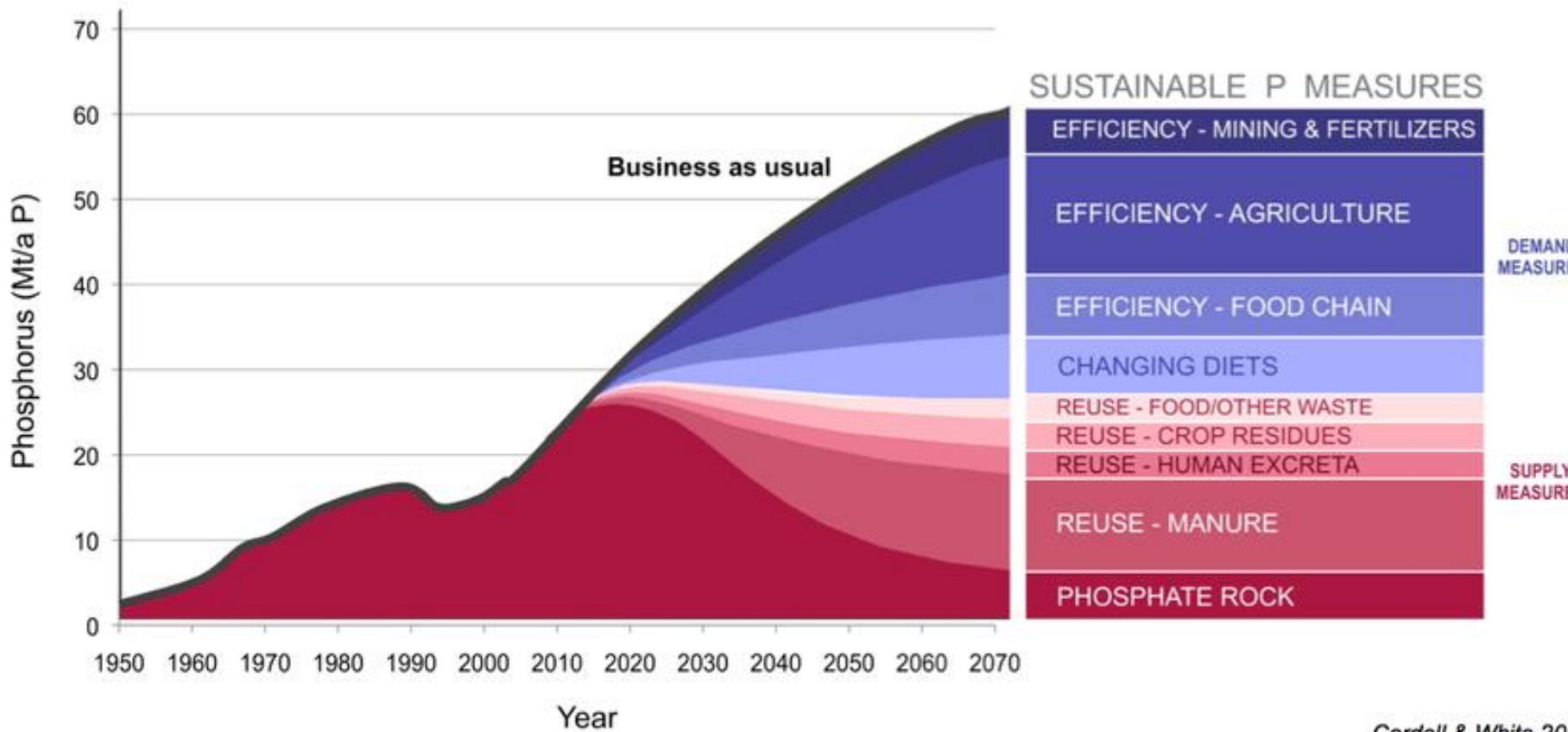
NO PHOSPHORUS, NO FOOD



Peak phosphorus curve



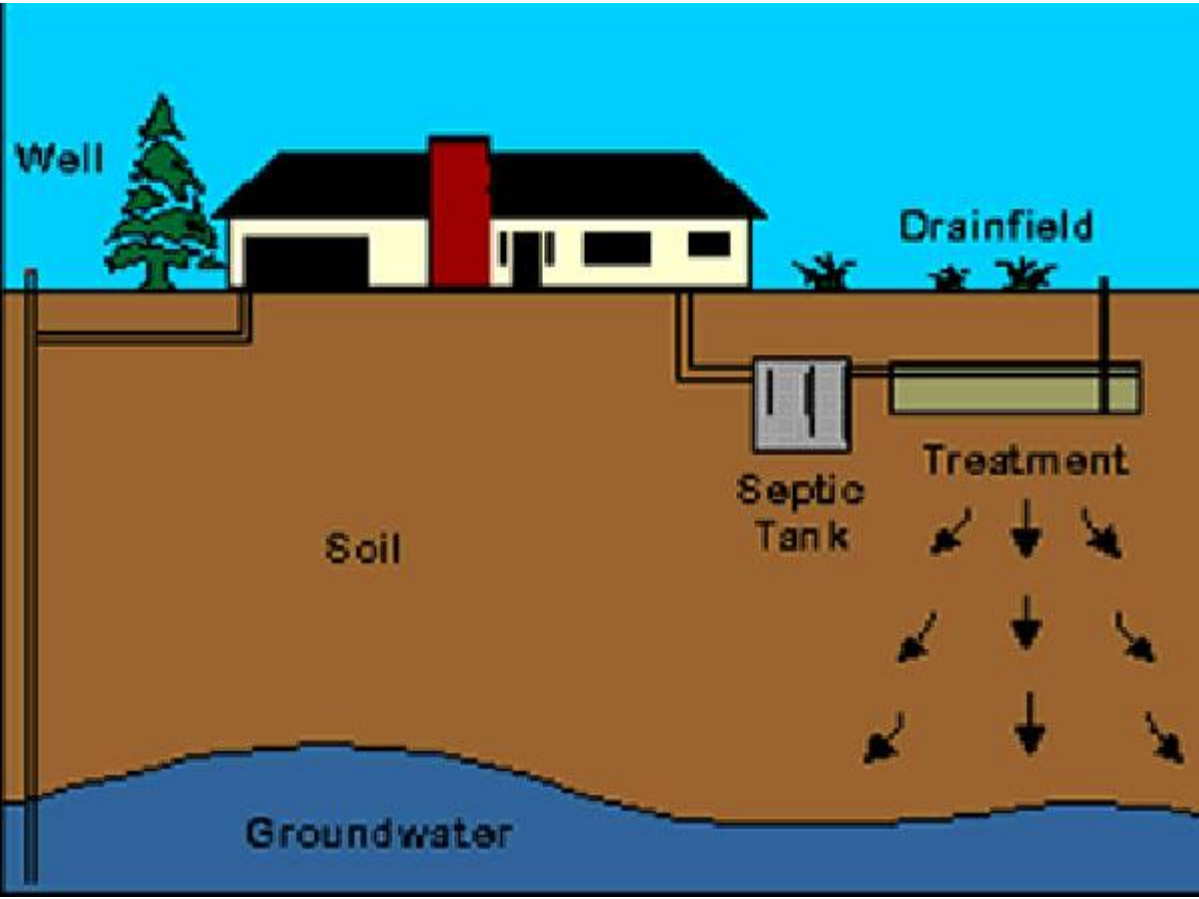




Towns in Ireland that do not treat waste water adequately - Ref The Journal Feb 15th 2017

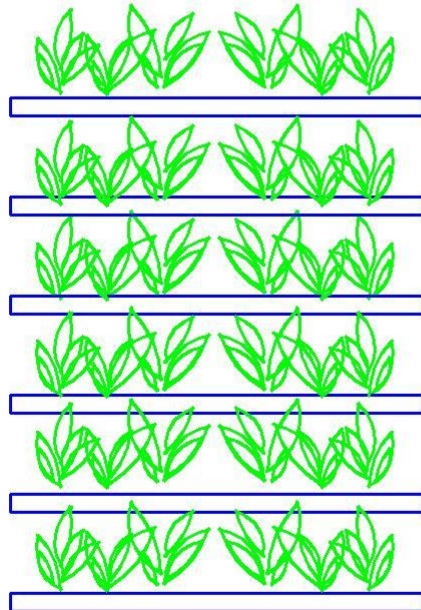
- Arklow
- Athlone
- Ballybofer/Stranorlar
- Ballincollig New
- Castlecomer
- Cavan
- Clifden
- Clonakily
- Dundalk
- Enfield
- Enniscorthy
- Fermoy
- Gaoth Dobhair
- Killarney
- Killybegs
- Longford
- Mallow
- Middleton
- Monksland
- Navan
- Nenagh
- Oberstown
- Pasage/Monkstown
- Portarlington
- Rathcormac
- Ringaskiddy
- Ringsend
- Roscommon Town
- Roscrea
- Shannon Town
- Thurles
- Tralee
- Tubbercurry
- Youghal
- Waterford City

THE EUROPEAN COMMISSION has confirmed it plans to take Ireland to the Court of Justice of the EU for what it describes as a failure to ensure that urban waste water in 38 areas “is adequately collected and treated to prevent serious risks to human health and the environment”

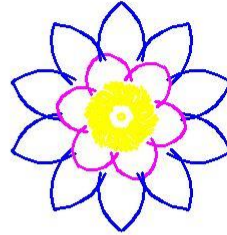


Ag usáid uisce spéire & mún mar leas sa garraí glasraí

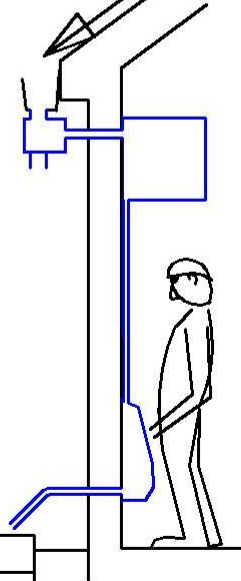
Herr Ltd



I seomra dorcha amach as an griain



Uisce Spéire



An mún meascáithe le uisce spéire

Túr na Gaoithe
Philipstown HBX
Castleblaney Rd
Dundalk
County Louth
00 353 (0)42 9377689
00 353 (0)86 1700569
www.herr.ie

Herr © June 2016

Phosphorous rock is a limited resource and will eventually be depleted.

Separating human urine from domestic waste water is necessary so that the phosphorous can be recycled sustainably to grow garden crops

Herr Ltd system to use the nutrients in urine as a safe fertilizer for the garden - with little human contact with the urine; by growing plants

Locate the Green Wall system on the sunny side of the house

Simply cut and leave the leaves on the ground that needs fertility



Herr Ltd

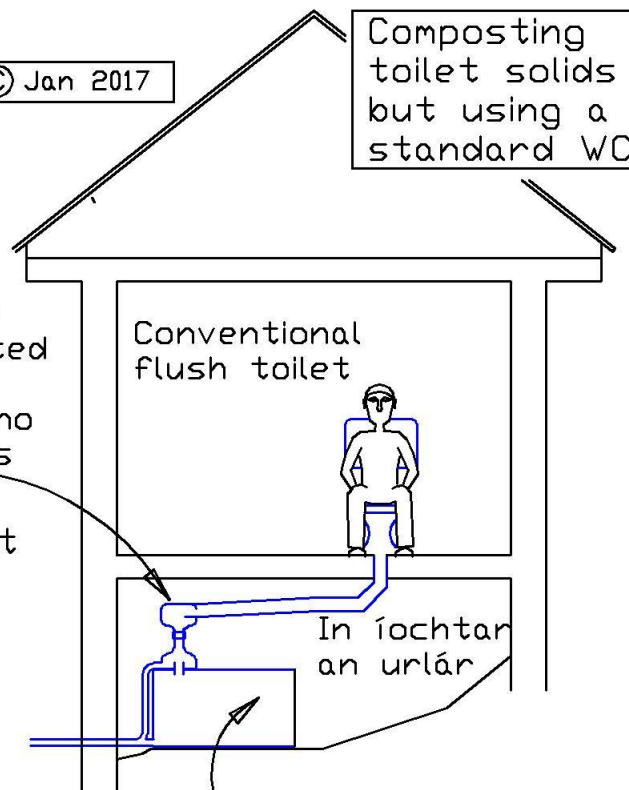
Herr © Jan 2017

Dundalk
County Louth
042 9377689
www.herr.ie

Toilet solids
are separated
from flush
water with no
moving parts

Bosca péist
talún ag
athrú an
ábhar
feartha
go múirín

□ikríonn gach rud
sa léaráid seo
gan cumhacht ná
leictreachas



Ventilated and aerated
plastic bin collects the
toilet solids that then
become composted by earth
worms. Eventually this material
is used as fertilizer around
fruit trees and flowers

A Food Waste Digester from ZWAI for a Hotel

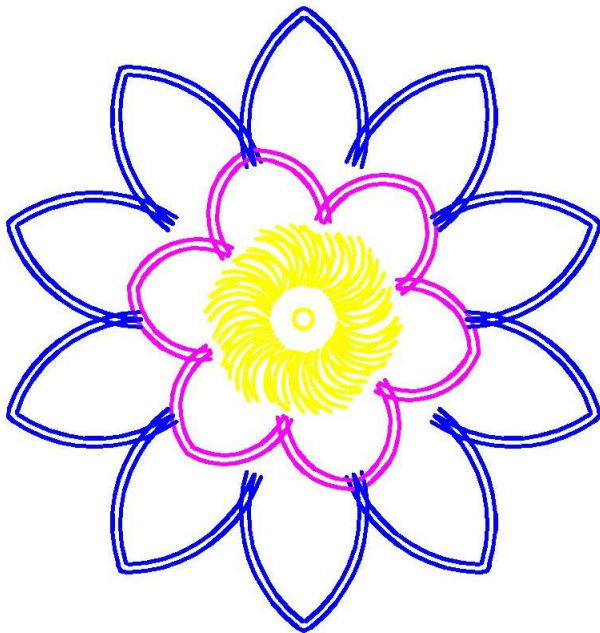


Food Price inflation is Unavoidable

- Because Phosphorus Rock is Finite
- The Resource continues to be wasted
- Cheap Oil will end at the same time as cheap phosphorus - also impacting price
- With so many other pressing environmental problems we won't change our waste water treatment systems in time
- It will take 30 years to transform our domestic and city waste water systems

Therefore

- More families will be forced to grow your own food with future food price inflation
- Start a home vegetable garden
- Fertilize it with manure from hens or cows.
- Compost all food & vegetable waste
- With small sub urban gardens people will begin to safely recycle human excrement
- Otherwise millions will go hungry.



Herr Ltd

Túr na Gaoithe
Philipstown HBX
Castleblaney Rd
Dundalk
County Louth
ollan.herr@herr.ie
00353 42 9377689
00353 86 1700569
www.herr.ie