

Climate Change in Wales: Health Impact Assessment

Newid Hinsawdd yng Nghymru: Aseiad o'r Effaith ar Iechyd

Nerys Edmonds, Principal Public Health Practitioner, Public Health Wales

Nov 21st 2023

Warmer, wetter winters and hotter, drier summers are expected for Wales, along with sea levels rises

Increased risk of extreme weather, flooding, and heatwaves.

Disgwyllir gaeafau cynhesach, gwlypach a hafau poethach a sychach i Gymru, gyda chynnydd yn lefel y môr yn cyd-fynd â hynny.

Mwy o berygl o dywydd eithafol, llifogydd a tywydd poeth



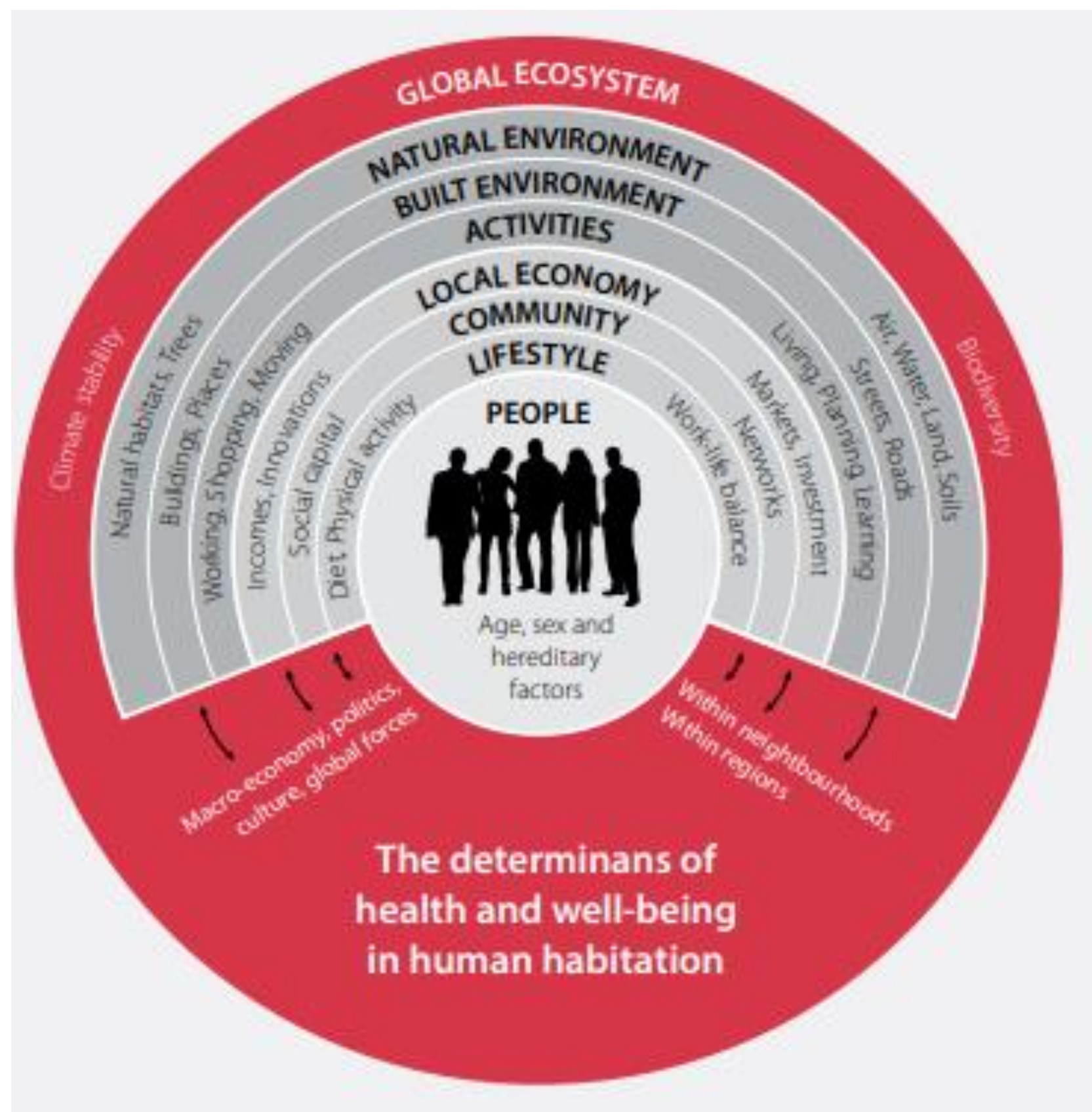
Met Office CP 18 (2018)

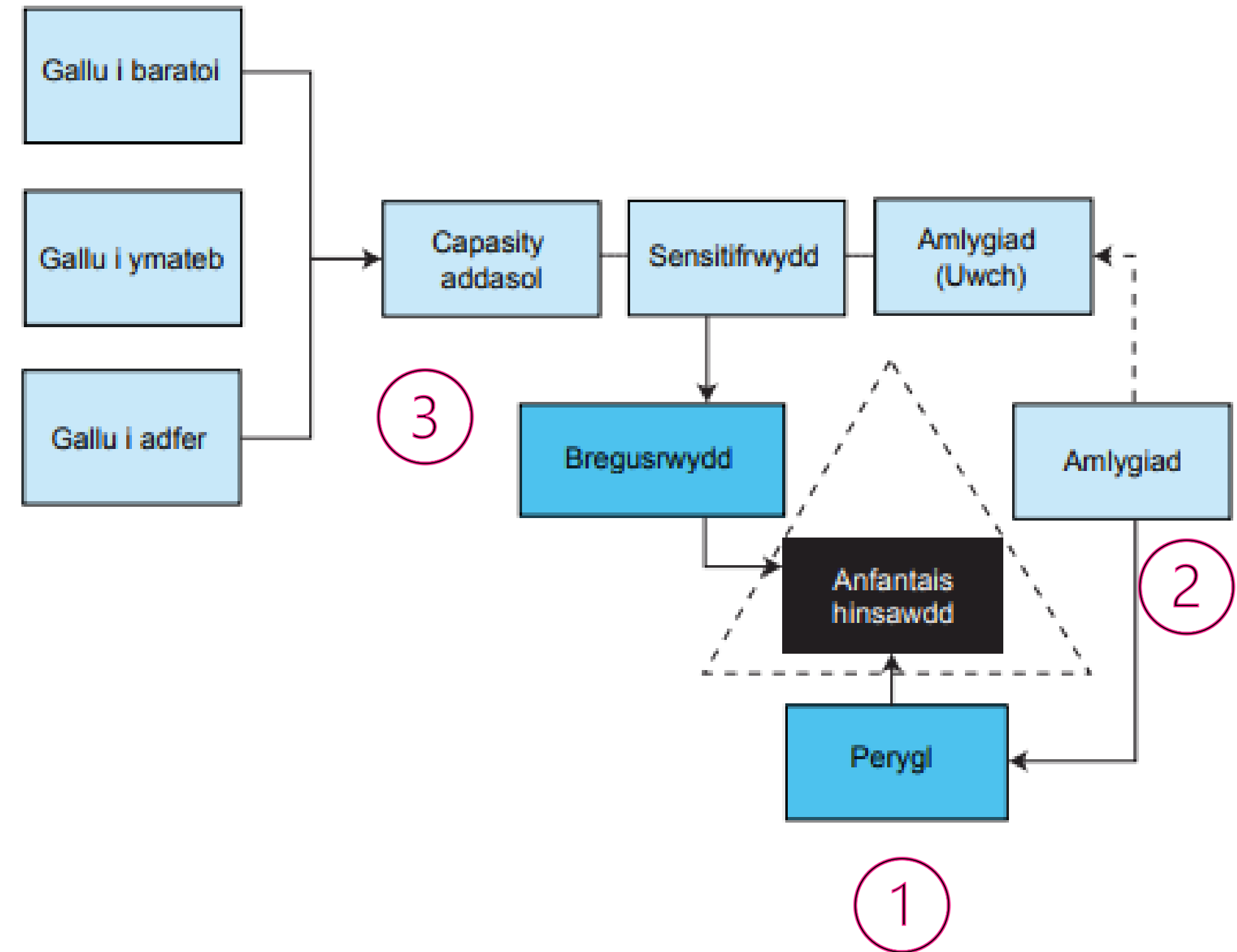
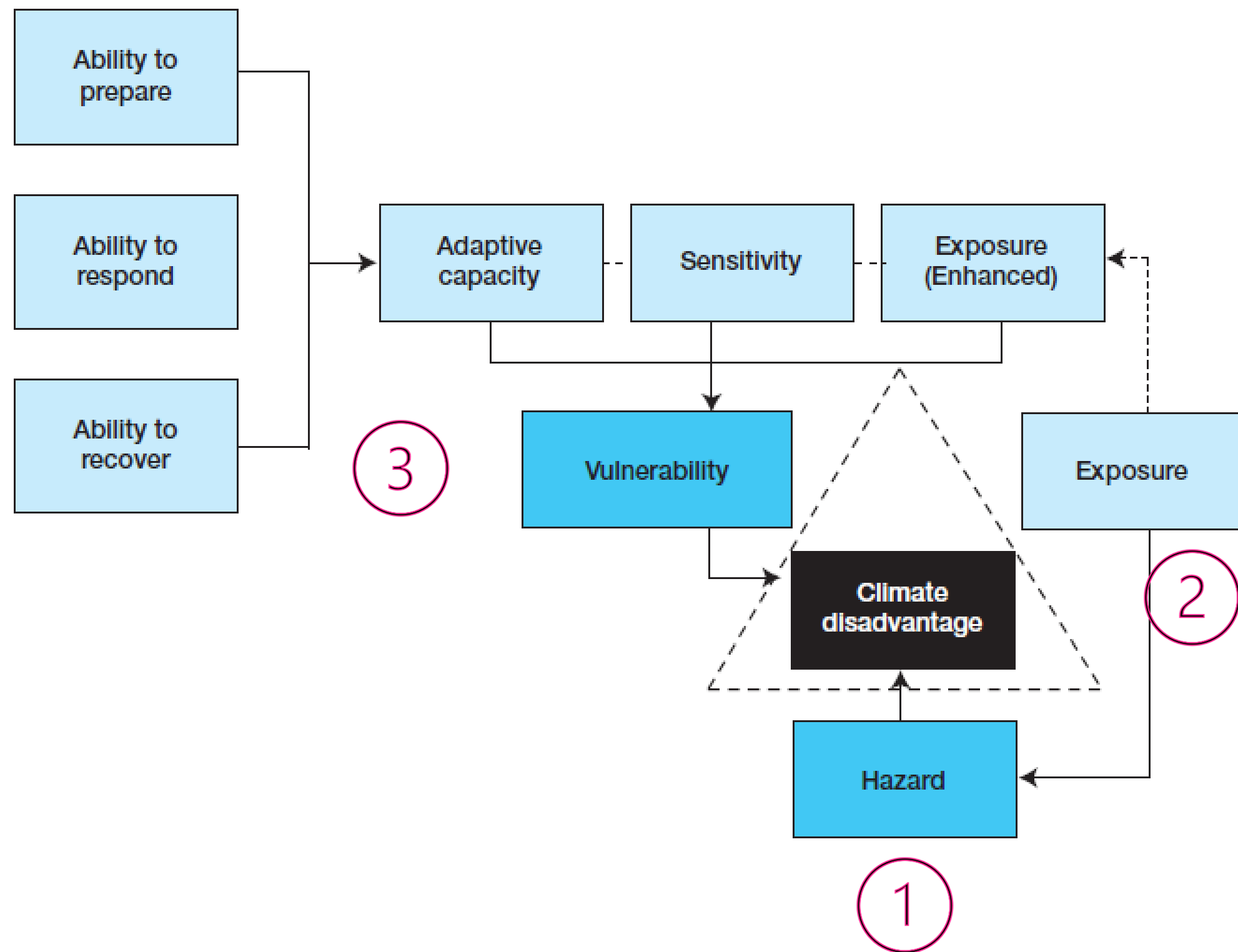
What does climate
change mean for
different population
groups and
communities in Wales?



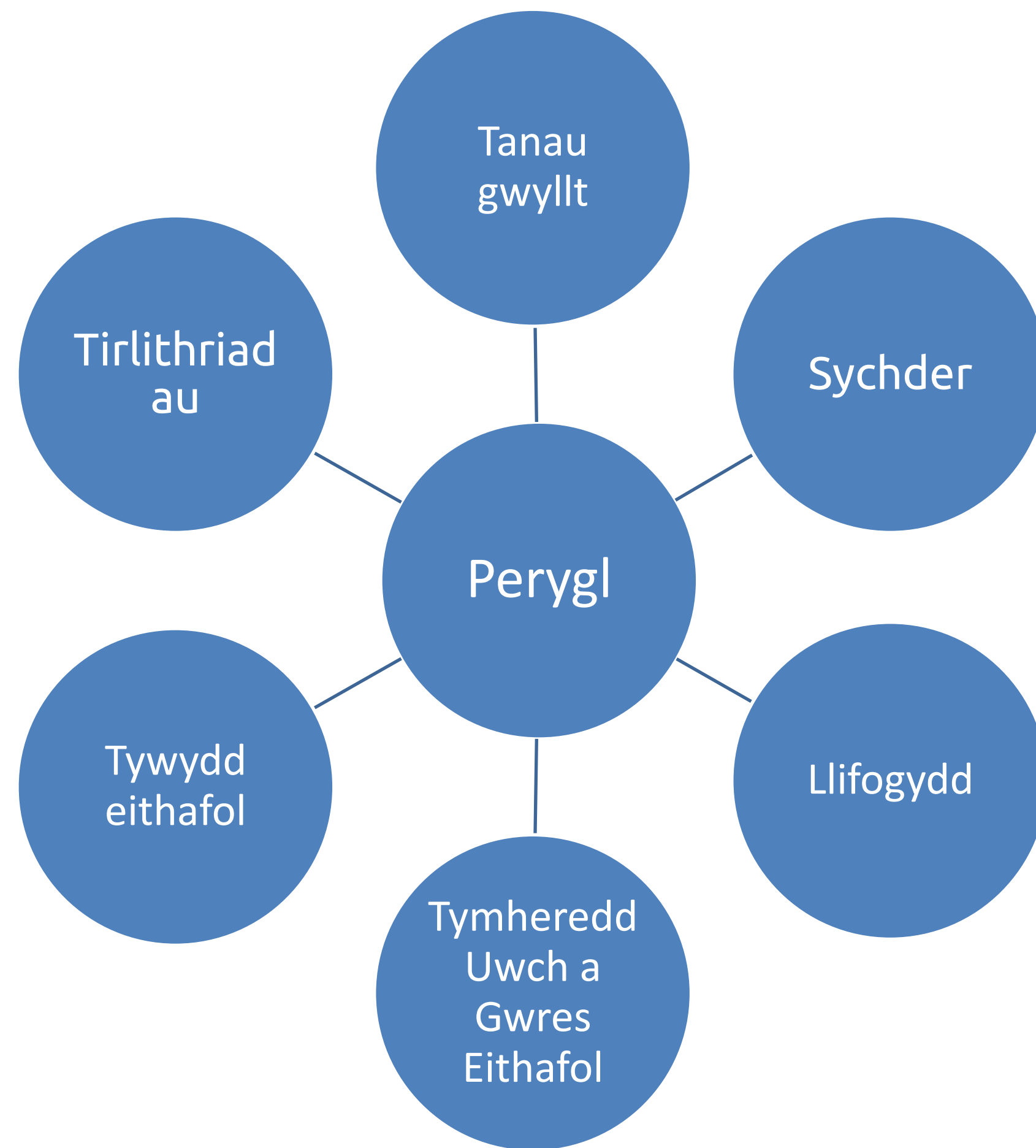
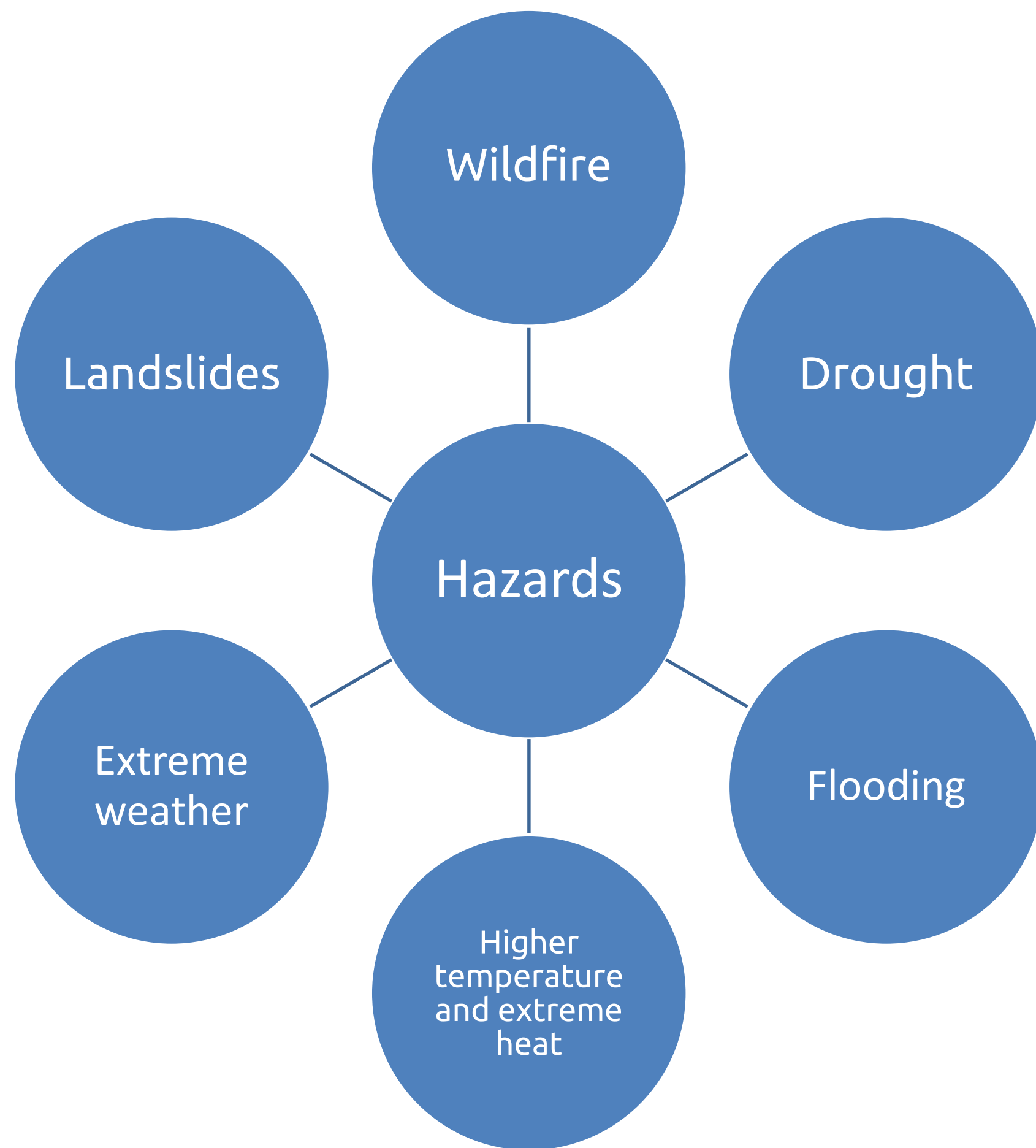
Beth mae newid hinsawdd yn ei
olygu i wahanol grwpiau
poblogaeth a chymunedau yng
Nghymru?

- To identify the potential health and well-being impacts of climate change in Wales - whether physical, mental or social
- To identify how climate change will affect people's lives where they live, work, learn and play - what does it mean?
- Provide evidence for integration of health into adaptation planning and policy making
- Nodi effeithiau iechyd a llesiant posibl newid hinsawdd yng Nghymru - boed yn gorfforol, yn feddyliol neu'n gymdeithasol
- Nodi sut bydd newid hinsawdd yn effeithio ar fywydau pobl lle maent yn byw, yn gweithio ac yn chwarae, beth mae'n ei olygu?
- Darparu tystiolaeth ar gyfer integreiddio iechyd i mewn i gynllunio addasiadau a llunio polisiau





A conceptual framework for assessing socio-spatial vulnerability and climate disadvantage . Credit: Sarah Lindley, John O'Neill, Joseph Kandeh, Nigel Lawson, Richard Christian and Martin O'Neill (2011) Climate change, justice and vulnerability. JRF



Llifogydd ac iechyd

The risk of having probable depression, anxiety or PTSD is approximately six times higher in people whose homes are flooded, than in those who are unaffected.

6x

Mae'r risg o gael iselder, gorbryder neu PTSD tebygol tua chwe gwaith yn uwch mewn pobl y mae eu cartrefi dan lifogydd, nag yn y rhai nad ydynt yn cael eu heffeithio.

Flooding and health

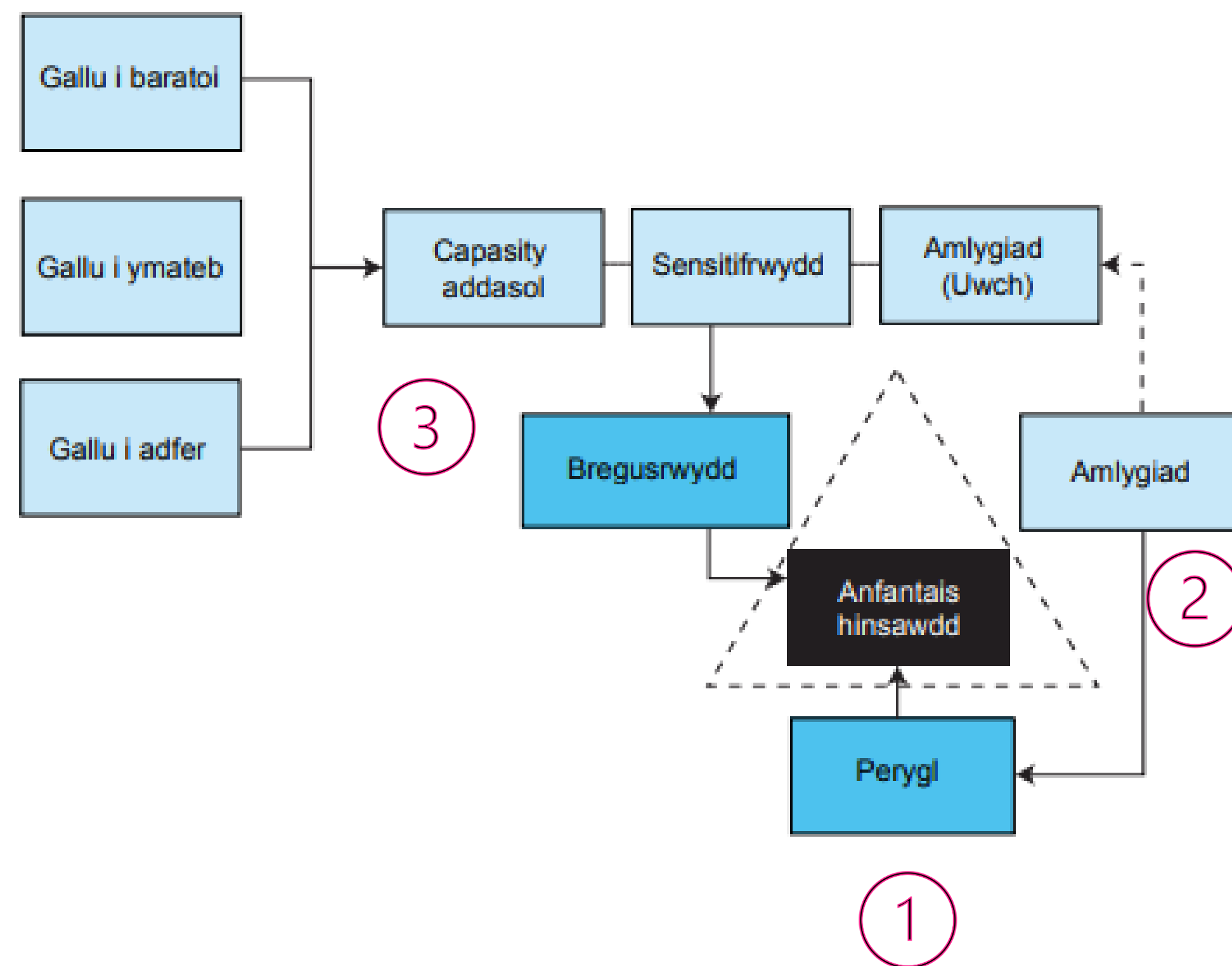
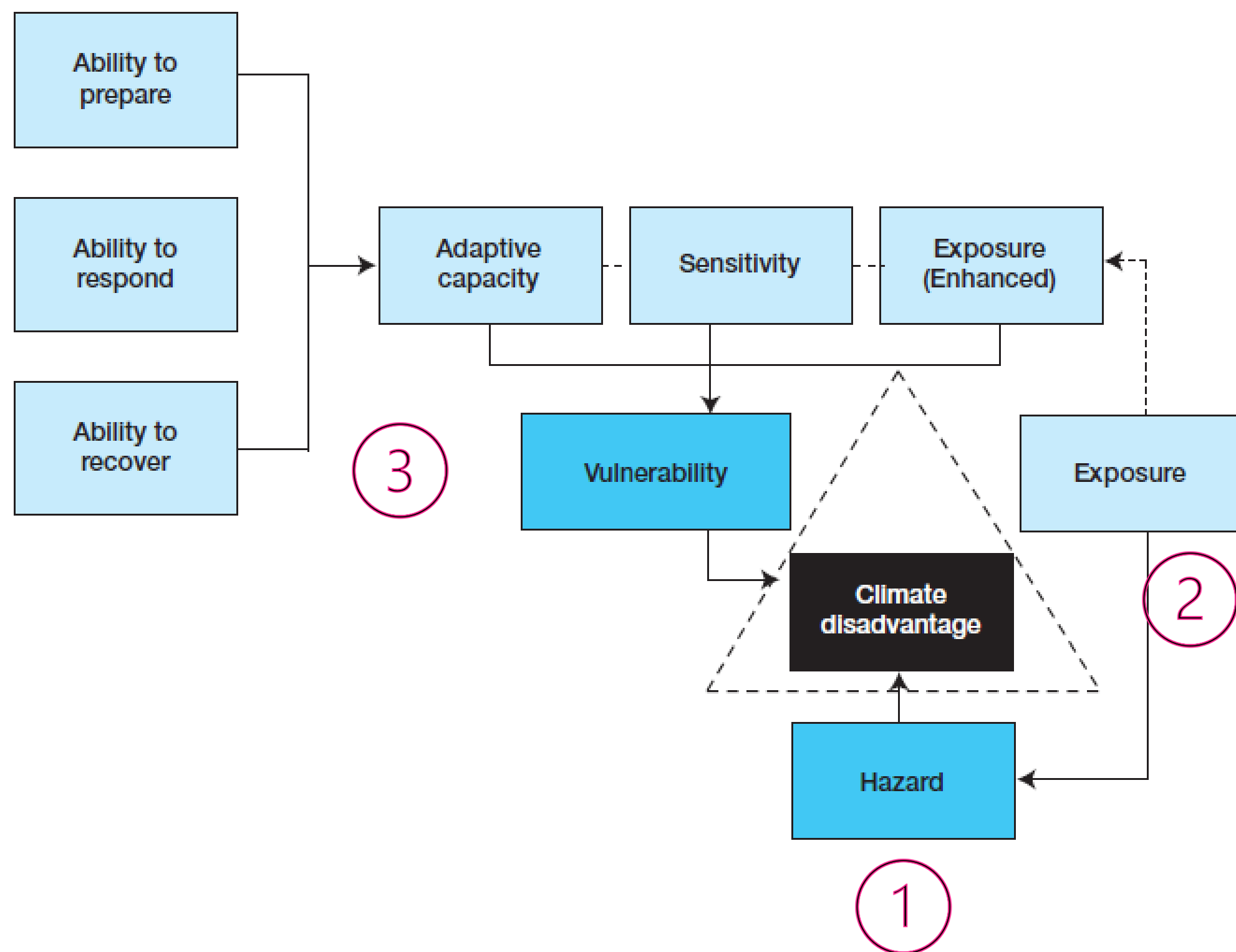


Higher temperatures and extreme heat

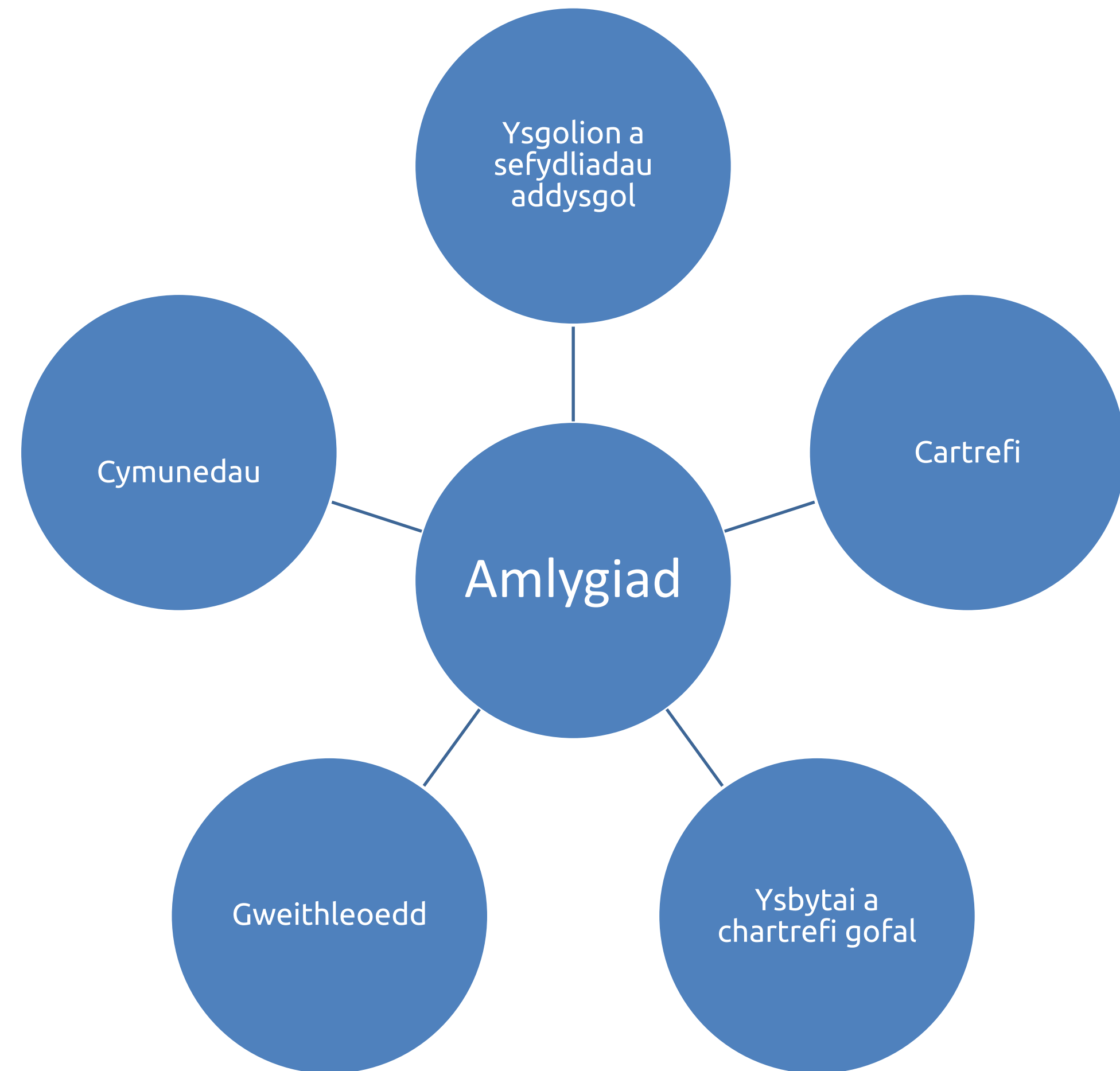
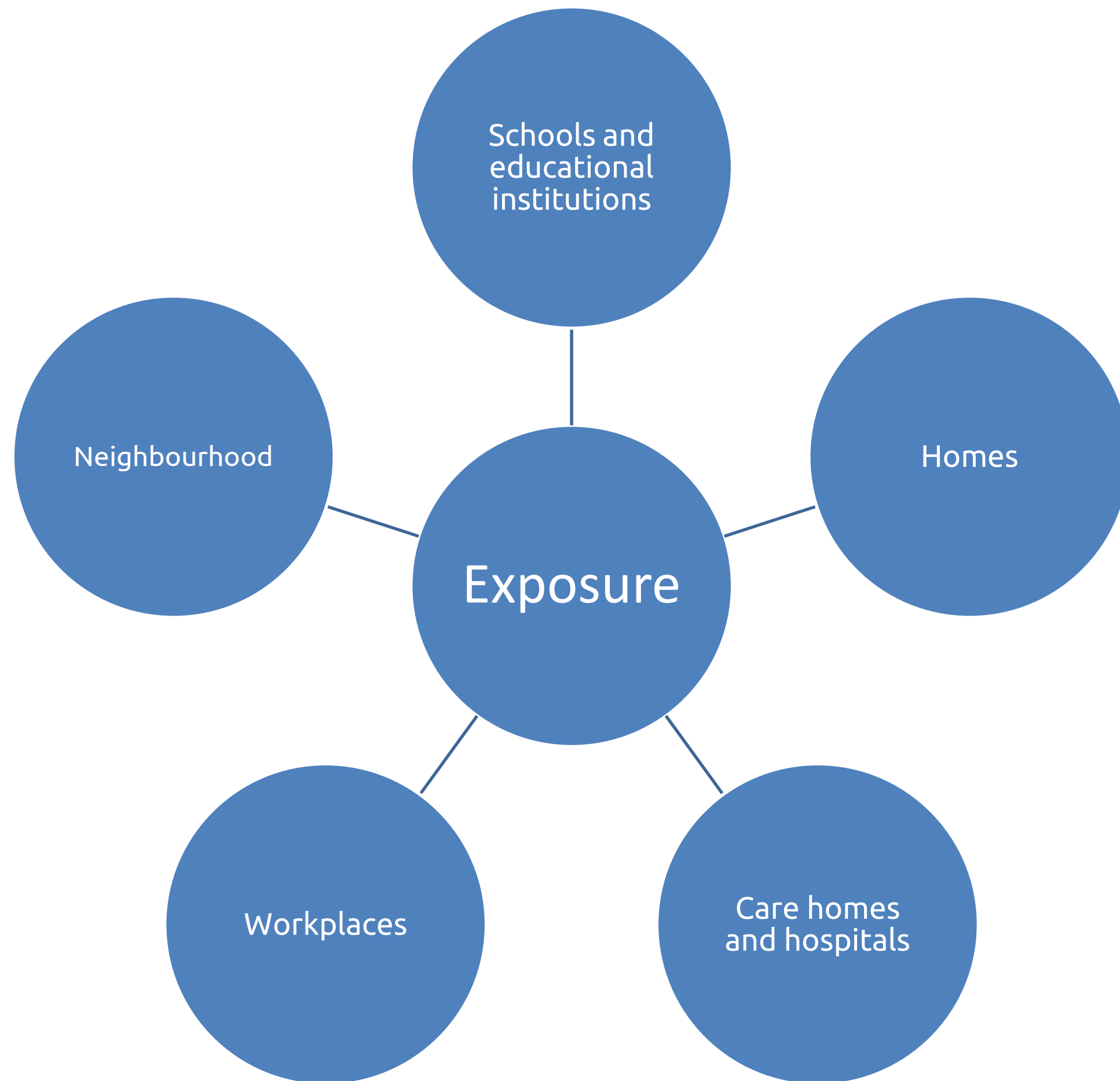
- Mortality from respiratory, cardiovascular, dementia related conditions, alcohol and substance misuse
- Dehydration
- Heat related illness
- Negative impacts on birth outcomes
- Injuries and accidents, including drowning
- Social isolation
- Worse symptoms of mental disorder
- Increased demands on health services

Tymheredd Uwch a Gwres Eithafol

- Marwolaethau o gyflyrau anadlol, cardiofasgwlaidd, cysylltiedig â dementia, a chamddefnyddio alcohol a sylweddau
- Dadhydradu
- Salwch sy'n gysylltiedig â gwres
- Effeithiau negyddol ar ganlyniadau genedigaeth
- Mwy o anafiadau a damweiniau, gan gynnwys boddi
- Arwahanrwydd cymdeithasol
- Symptomau gwaeth anhwylder meddwl
- Galw cynyddol ar wasanaethau iechyd



A conceptual framework for assessing socio-spatial vulnerability and climate disadvantage . Credit: Sarah Lindley, John O'Neill, Joseph Kandeh, Nigel Lawson, Richard Christian and Martin O'Neill (2011) Climate change, justice and vulnerability. JRF



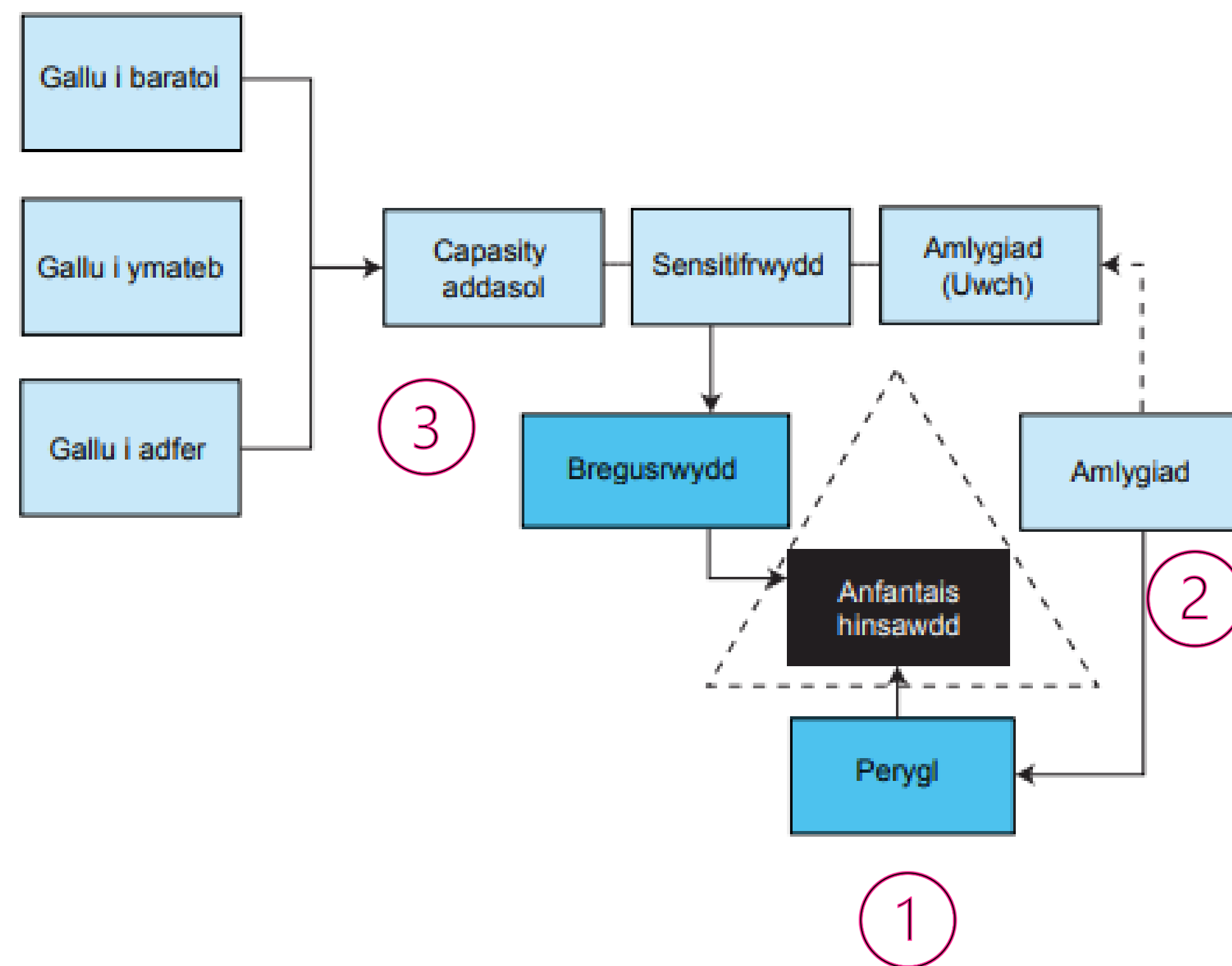
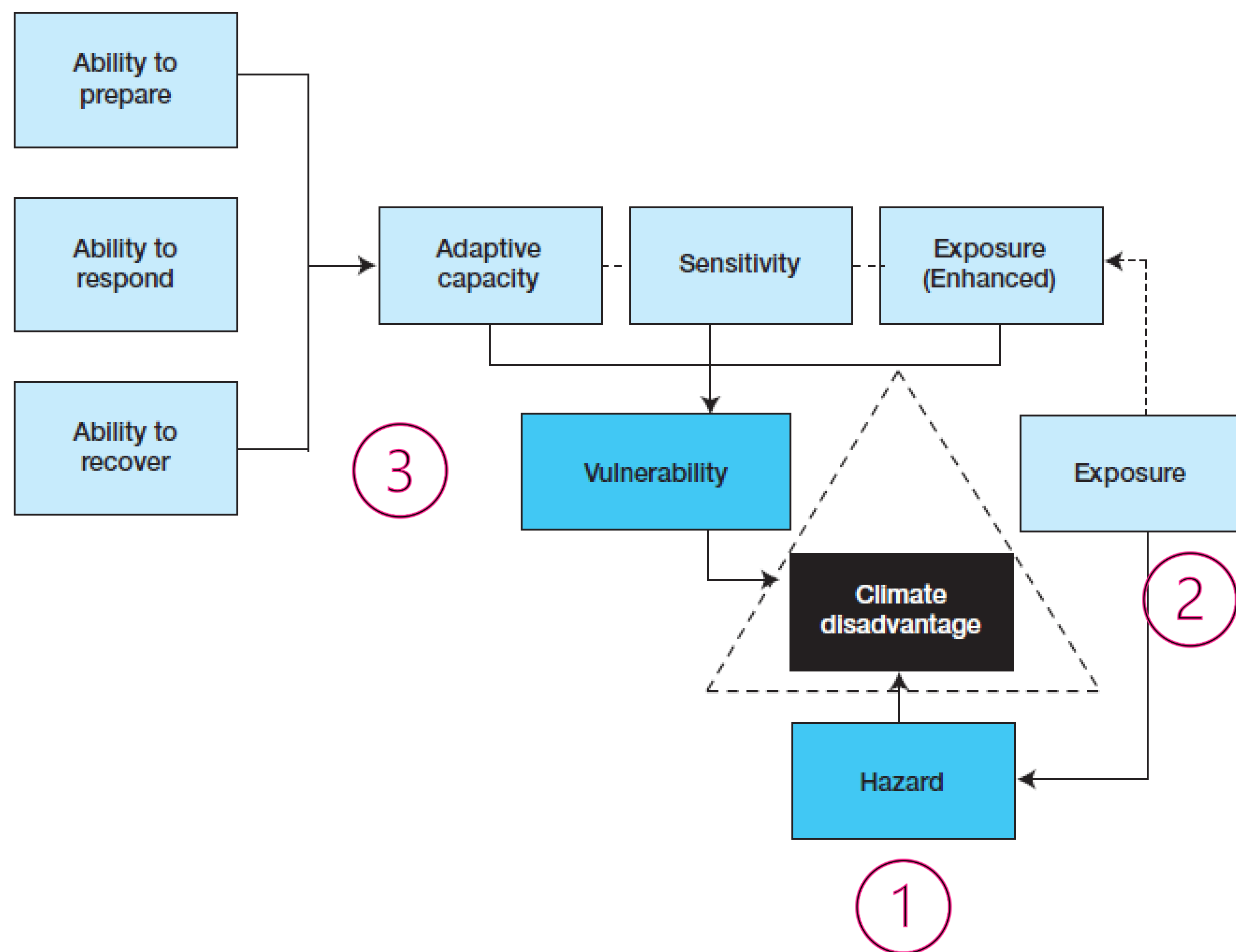
+ 60,000 people at risk from flooding from rivers from
2020 - 2120

An estimated
286,000 people
at risk of flooding
from the sea and
nearly 303,000
people at risk of
flooding from
rivers by **2120**



Mae hyn yn cyfateb i
amcangyfrif y bydd
286,000 o bobl
mewn perygl o
lifogydd o'r môr a
bron 303,000 o bobl
mewn perygl o
lifogydd o afonydd
erbyn **2120**

+ 95,000 yn fwy o bobl mewn perygl o lifogydd
o'r môr 2020 - 2120



A conceptual framework for assessing socio-spatial vulnerability and climate disadvantage . Credit: Sarah Lindley, John O’Neill, Joseph Kandeh, Nigel Lawson, Richard Christian and Martin O’Neill (2011) Climate change, justice and vulnerability. JRF

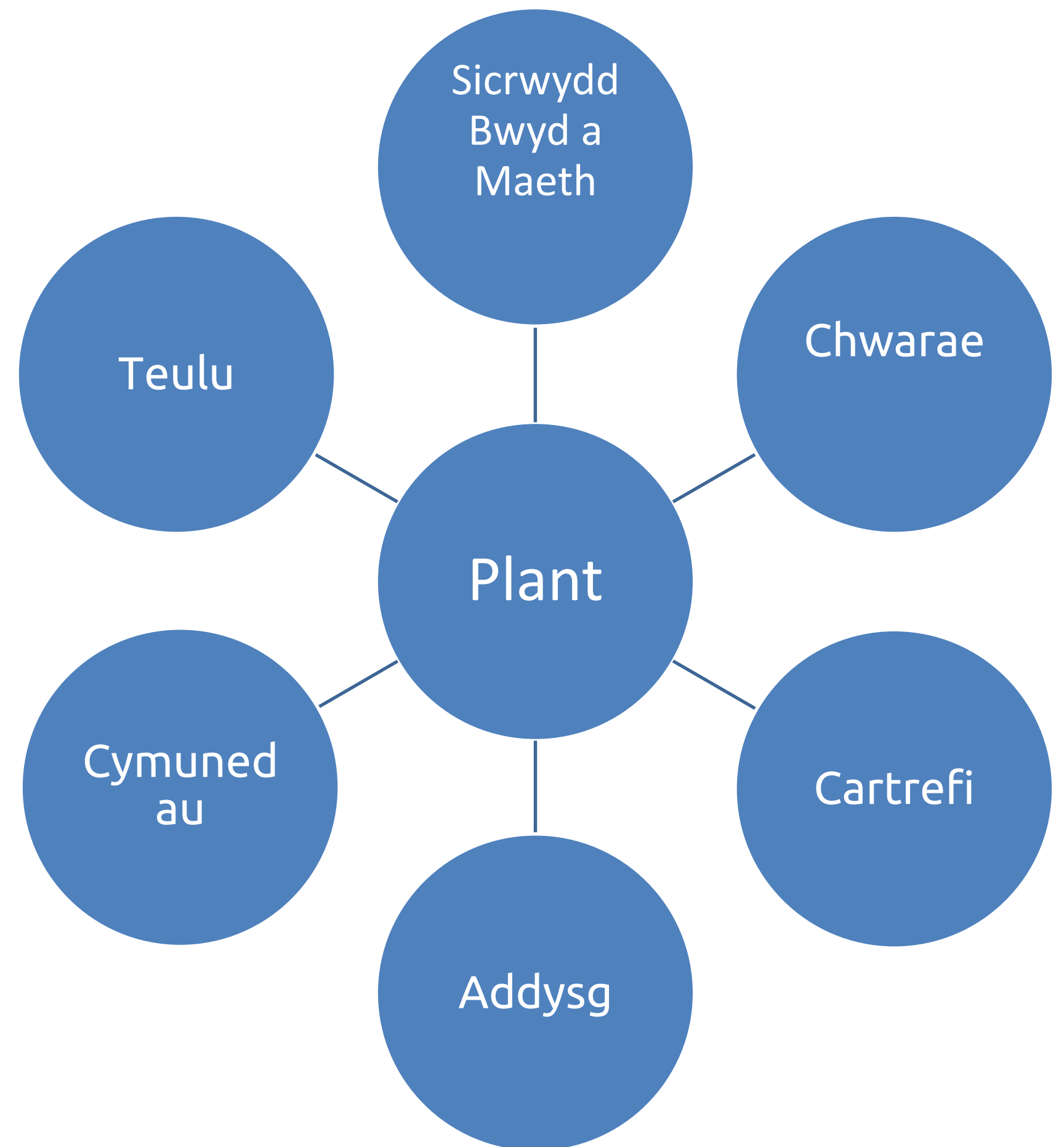
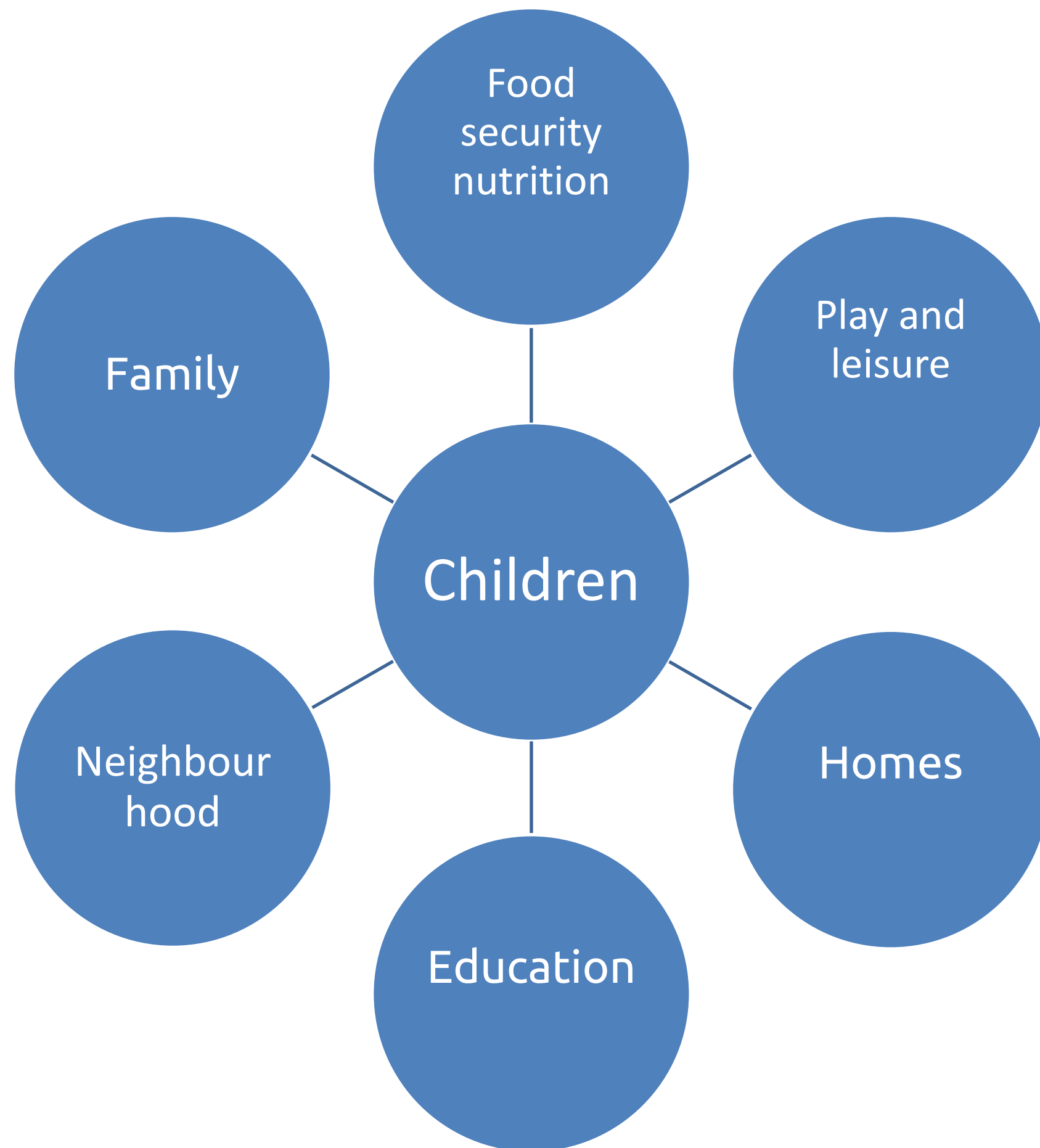
Higher temperatures and extreme heat:
Vulnerable groups include:

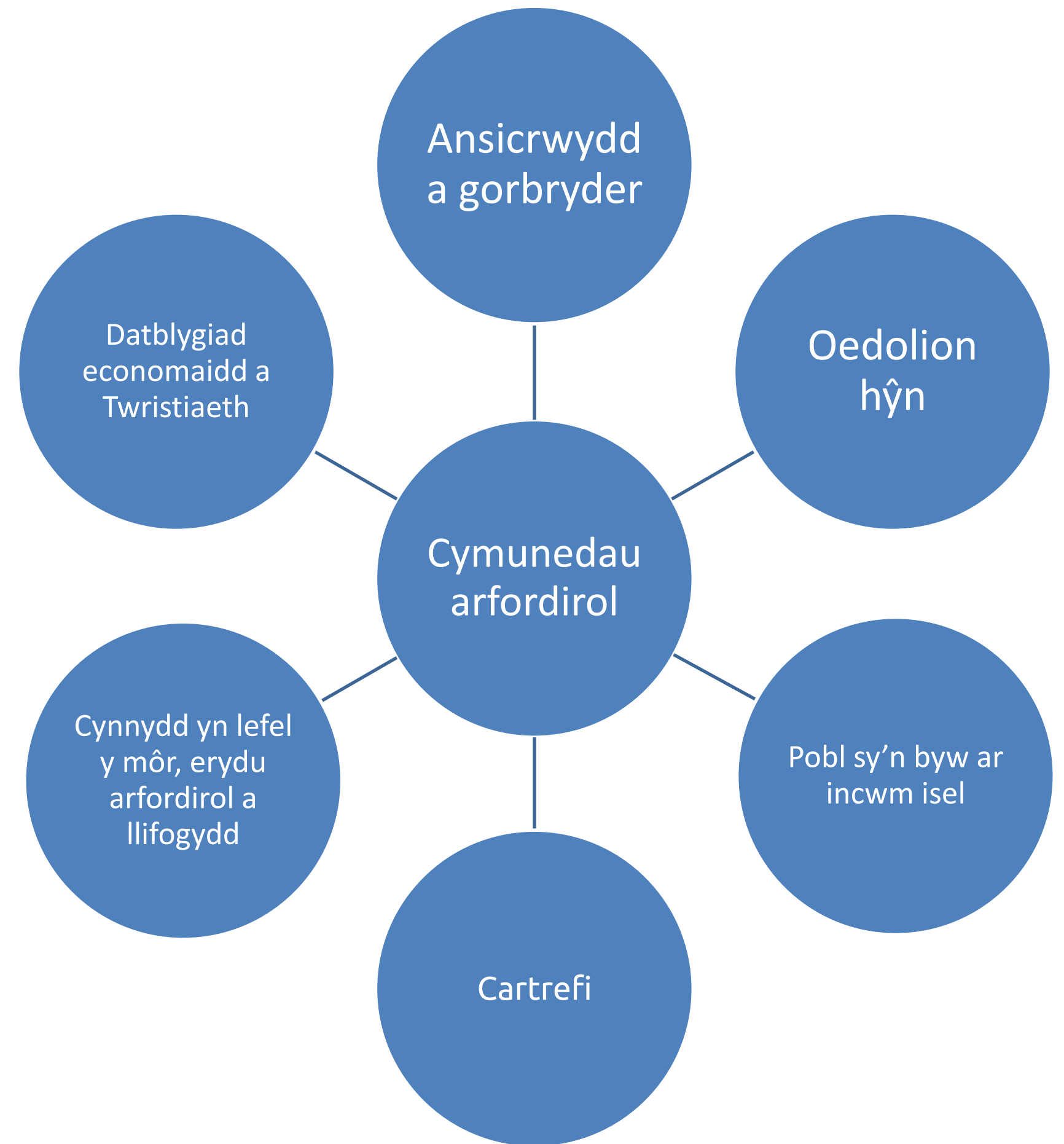
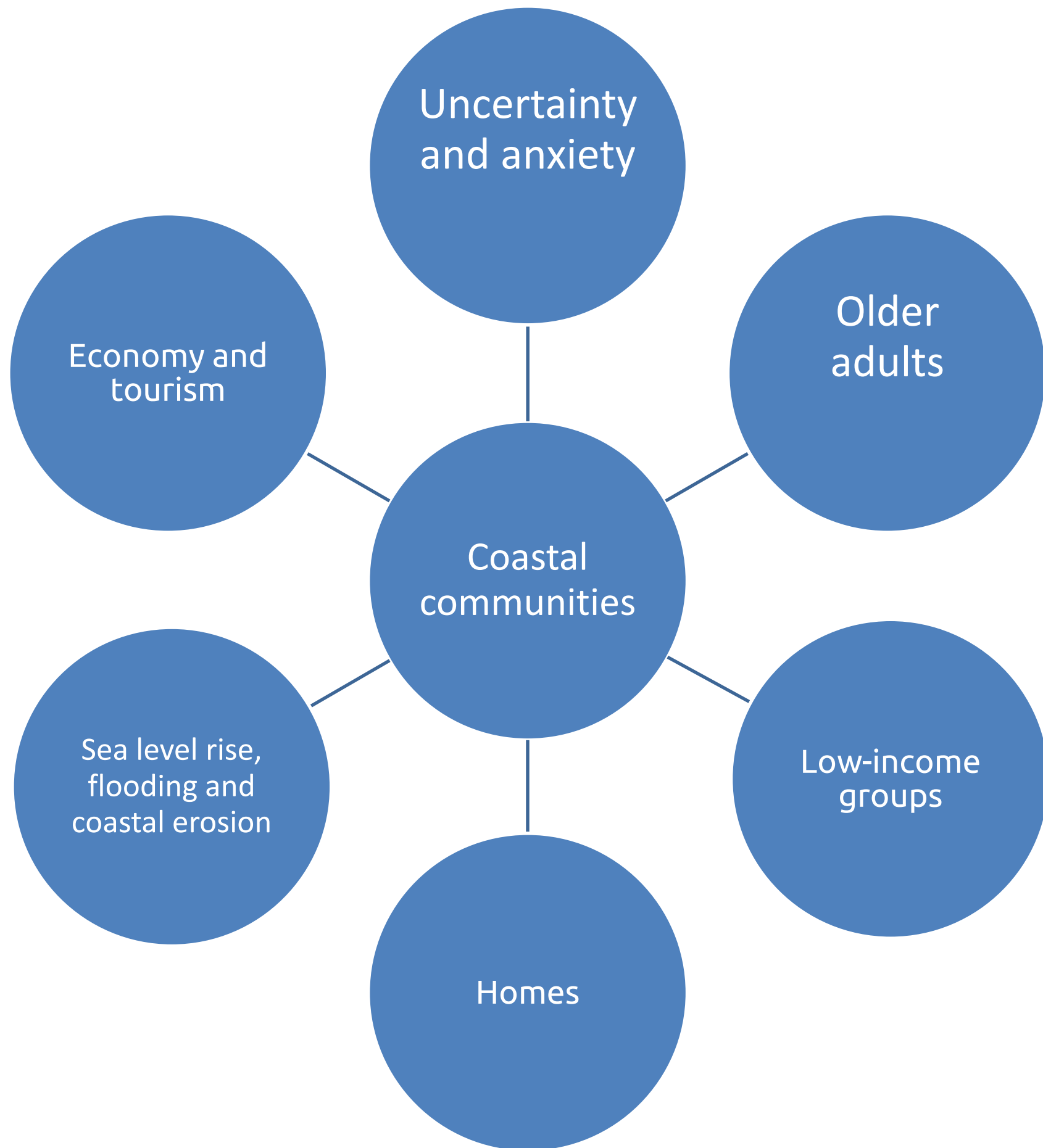


Tymheredd Uwch a Gwres Eithafol
Grŵp bregus:

- Older adults: especially over 75 years old, or those living on their own who are socially isolated, or in a care home.
- People with chronic and severe illness:
- Babies and younger children
- Homeless people
- People with alcohol dependence and drug dependence

- Oedolion hŷn: yn enwedig dros 75 oed, neu'r rhai sy'n byw ar eu pen eu hunain sy'n ynysig yn gymdeithasol, neu mewn cartref gofa
- Salwch cronig a difrifol
- Babanod a plant
- Gall pobl ddigartref
- Yn aml, mae iechyd cyffredinol pobl sy'n ddibynnol ar alcohol a chyffuriau yn waeth ac maent yn fwy ynysig yn gymdeithasol a all gynyddu eu risg o straen gwres.





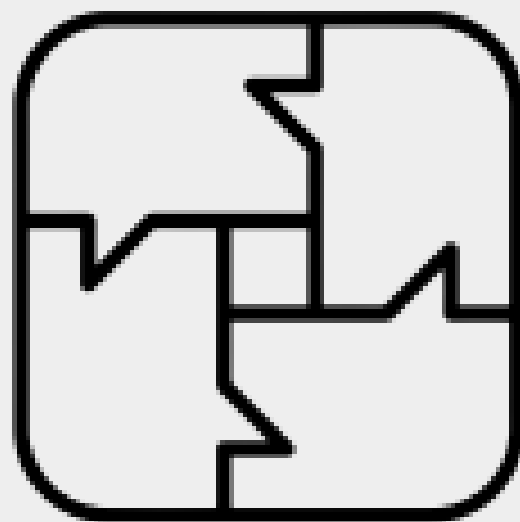
There are other factors that also influence health and wellbeing impacts including:

- Democracy, decision making and community engagement
- Psychosocial and behavioural factors
- Social media and communications (including risk communication)
- Sustainable development and decarbonisation

Mae yna ffactorau cyd-destunol sydd hefyd yn dylanwadu ar effeithiau iechyd a llesiant gan gynnwys:

- Democratiaeth, gwneud penderfyniadau ac ymgysylltu â'r gymuned
- Ffactorau seicogymdeithasol ac ymddygiadol
- Cyfryngau cymdeithasol a chyfathrebu (gan gynnwys cyfathrebu risg)
- Datblygu cynaliadwy a datgarboneiddio

1



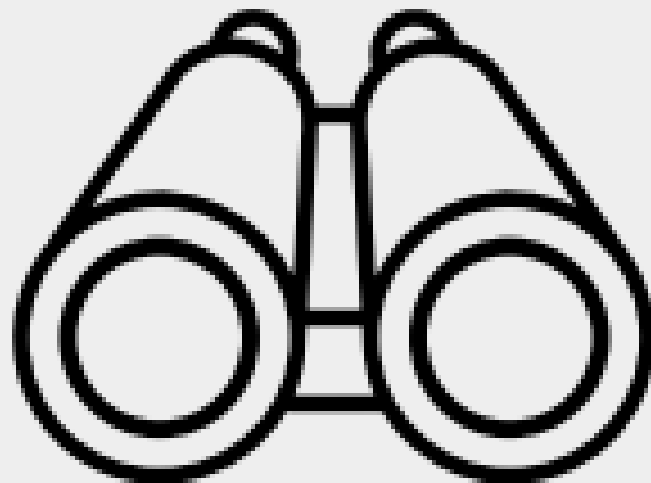
2



3



4



5







Outputs

- Summary report
- Impact tables
- Downloadable chapters
- Infographics
- PowerPoint slide deck
- Technical Report



Adnoddau

- Adroddiad cryno
- Tablau effaith
- Penodau y gellir eu lawrlwytho
- Inffograffics
- Dec sleidiau PowerPoint
- Adroddiad technegol

Determinants of Health impacted by climate change in Wales

Go to page

D1 [Food security and nutrition](#)

D2 Behaviours Affecting Health

D2.1  [Physical and outdoor leisure activity](#)

A1* [Alcohol and substance misuse](#)

D3 Social and community factors

D3.1  [Community resilience and cohesion](#)

D3.2/P3.1  [Population displacement, mobility and migration](#)

A2 [Violence](#)

A3 [Family and intergenerational relationships](#)

D4 [Mental health and wellbeing](#)

D5 Living and environmental conditions affecting health

D5.1  [Housing](#)

D5.2  [Air Quality](#)

D5.3/P6.2  [Flooding](#)

D5.4  [Higher temperatures and extreme heat](#)

D5.5  [Water supply and quality](#)

D5.6  [Natural Environment and Biodiversity](#)

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D5.7  [Landslides and coal tips](#)

D5.8  [Wildfires](#)

D5.9  [Vector Borne Disease](#)

D6 Economic conditions affecting health

D6.1/P5  [Working conditions](#)

D6.2  [Economic development and skills](#)

D7 Access and quality of services

D7.1  [Health and social care: access and delivery](#)

D7.2  [Education](#)

D8 Macro-economic, environmental and sustainability factors

D8.1  [Transport](#)



D8.2  [Infrastructure](#)

* Sections labelled A1-A3 summarise evidence appraised on impacts on three social determinants of health that were identified as important by stakeholders and are highly relevant to population health in Wales. However, limited evidence was identified in the literature to enable assessment of the level of potential impact on Wales, therefore each of these areas are recommended areas for further research



Population Groups who are more vulnerable and disproportionately impacted by the health and wellbeing impacts of climate change in Wales

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P1 Age related groups

- P1.1  [Babies, children and young people](#)
- P1.2  [Older adults](#)

P2 Sex/gender related groups

- P2.1  [Women](#)
- P2.2  [Pregnant women](#)
- P2.3  [Men](#)

P3 Groups at higher risk of discrimination or other social disadvantage

- P3.1  [Displaced people and Refugee and asylum seekers \(see D3.2\)](#)
- P3.2  [People with long-term health conditions and/or disabilities](#)
- P3.3  [People who are homeless](#)
- P3.4  [Minority ethnic groups](#)
- P3.5  [People who are new to an area](#)

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P4 Income related groups

- P4.1  [People living on a low income](#)

P5 [Occupational groups \(see D6.1\)](#)

P6 Geographical Groups

- P6.1  [Coastal communities](#)
- P6.2  [Flood risk areas \(see D5.3\)](#)
- P6.3  [Former and current industrial areas](#)
- P6.4  [Urban areas](#)
- P6.5  [Rural areas](#)
- P6.6  [Areas of multiple disadvantage](#)

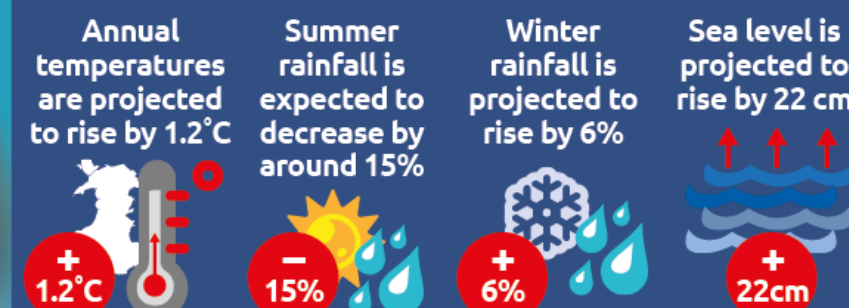
Health and wellbeing impacts of climate change

Climate change means that extreme weather, flooding and heatwave events are likely to occur more often in Wales

Climate change affects all parts of Wales. Some examples of health impacts for specific groups are shown below



By the 2050s in Wales:



Climate change is happening in Wales

✖ Extreme weather and flooding

- Disruption to education, outdoor sport and play
- Displacement from their homes, friends and community
- Stress and anxiety for themselves and their families

✖ Mental wellbeing

- Anxiety about how climate change will impact their future

✖ Air quality

- More susceptible to poor air quality and wildfire smoke

Children and young people

✖ Increased heat

- Higher risk of heat related illness

✔ Positives

- Have a positive role in reducing carbon emissions and adaptation to climate change
- Can be positive agents of change
- Practical and creative ideas to help communities recover from disasters

People on low income

✖ Extreme weather and flooding

- Less resources to prepare, respond and recover from floods or other extreme weather
- Less likely to be fully insured

✖ Air quality

- Air pollutant concentrations are currently higher in areas of socioeconomic disadvantage

✖ Food and nutrition

- Potential for increase in food costs

✔ Positives

- Potential in the long term for reduced heating costs

Climate change affects us all

Older adults

✖ Extreme weather and flooding

- Disruption to access to health, social care and support services
- Displacement from their home and support networks
- More vulnerable in emergency situations such as flooding
- Increase in mental distress

✖ Increased heat

- Higher risk of heat related illness and mortality
- Social isolation may increase during heat waves

✖ Air quality

- Older adults are more susceptible to poor air quality and wildfire smoke

✔ Positives

- Warmer winters are projected to decrease cold related deaths

People with disabilities and long-term health conditions

✖ Extreme weather and flooding

- Disruption to access to health, social care and support services
- Increase in mental distress
- More vulnerable in emergency situations such as flooding

✖ Increased heat

- Negative impacts on some conditions such as mental health problems, cardiovascular and respiratory disease, and diabetes
- Some medications can increase vulnerability to heat related illness
- Social isolation
- Sleep disturbance

✖ Air quality

- Those with respiratory conditions are more susceptible to poor air quality and wildfire smoke

• Planning and preparing for climate change needs to include action across sectors to promote and protect the health and wellbeing of different population groups and places in Wales.

Reference:

Edmonds, N., and Green, L. (2023) Climate Change in Wales: Health Impact Assessment, Public Health Wales NHS Trust.
<https://phwwhocc.co.uk/resources/climate-change-in-wales-health-impact-assessment>

Contributors:

Sumina Azam, Mark A Bellis, Katie Creswell, Christine Clar, Morganna Davies, Mark Drane, Michael Fletcher, Karen Hughes, Kristian James, Natasha Judd, Sue Toner, Phil Wheeler, Sara Wood.

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Cymru
Public Health
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Gweithio gyda'n gilydd
i greu Cymru iachach

Working together
for a healthier Wales

