

Why EIA? Intro and background to EIA

ACBA 7004

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Outline

- **History of the EIA**
- What is Environmental Impact
- Process of conducting an EIA
- **BREAK**
- Key EIA Stages
- Reviewing EIA



Activity

Comment on your progress with finding an EIA report. Consider the following and report back to the group:

What EIA did you find? Was it hard to find? Briefly summarise its scope/purpose.

Introduction and History of the EIA

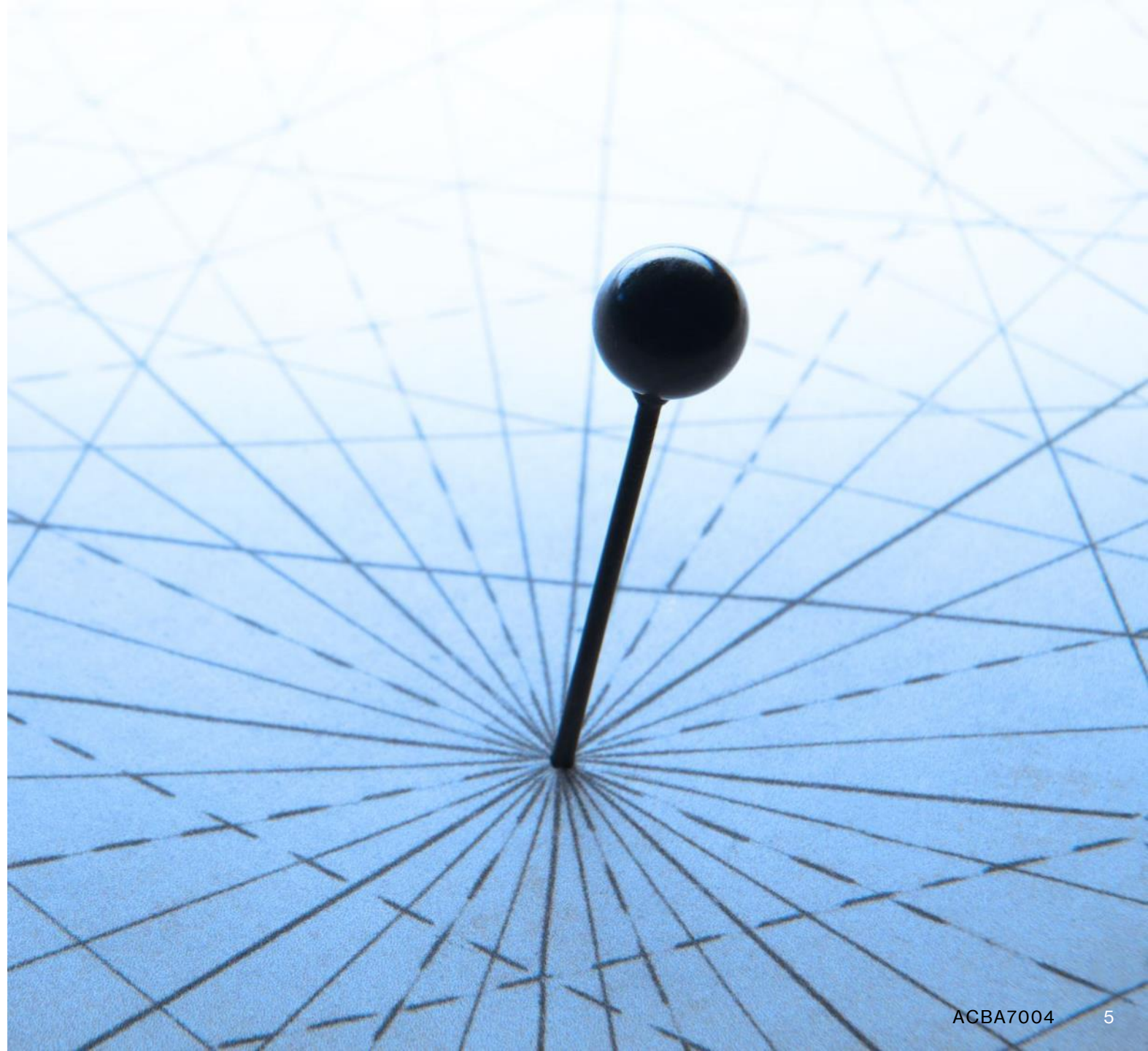
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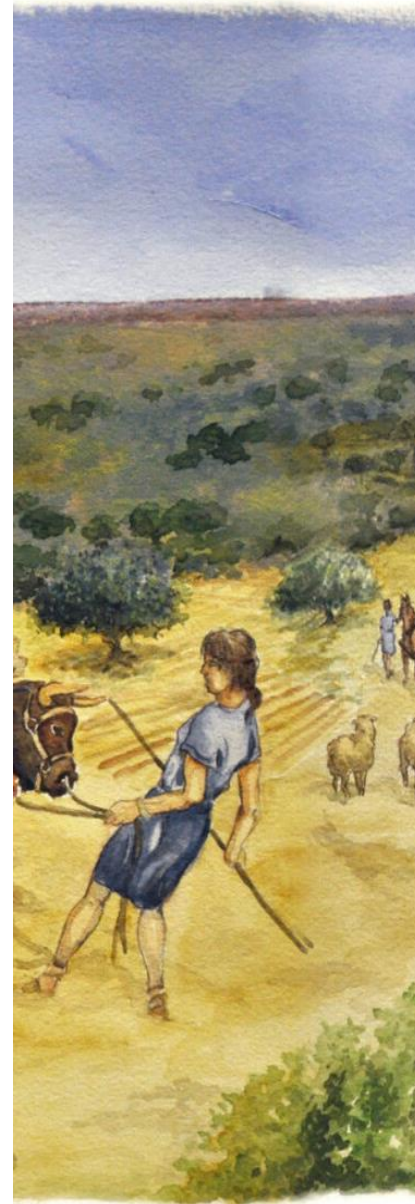
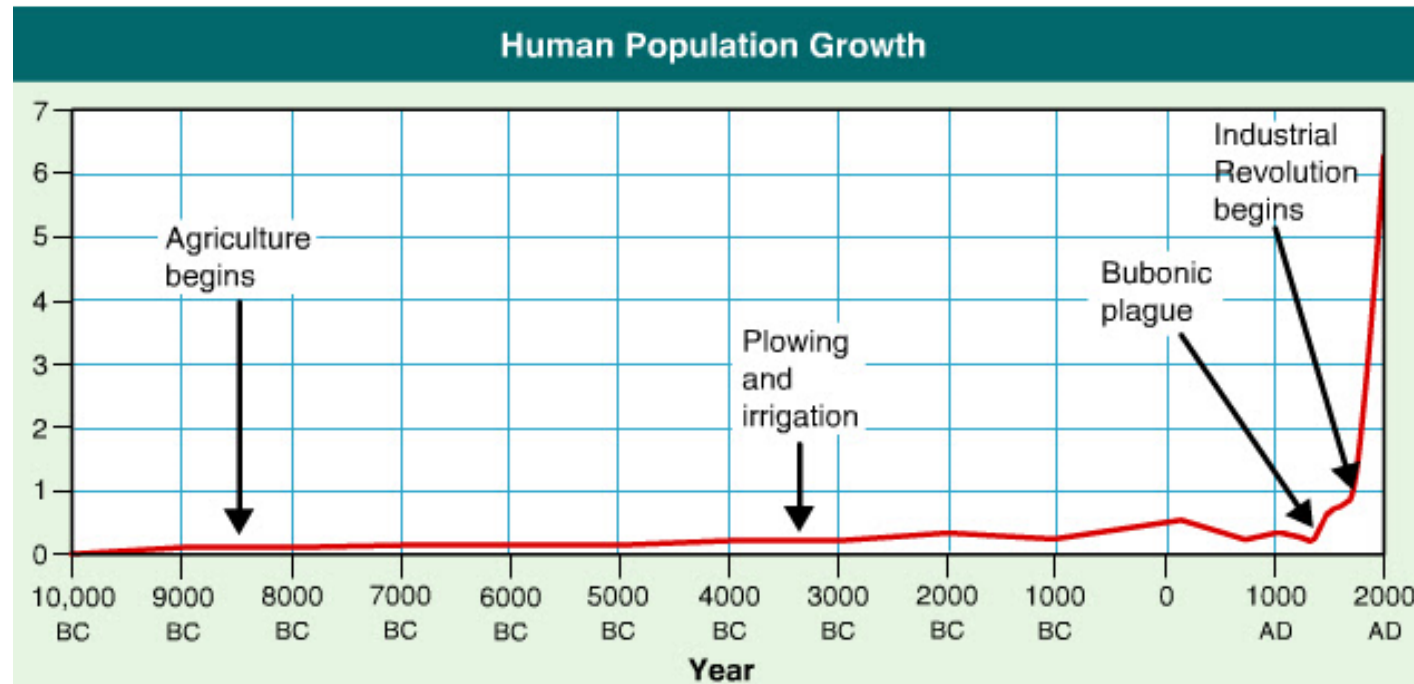
Last Week...

- Read the following:
- **Beatley (1989)**
Environmental Ethics
and Planning Theory
- Select an EIA for your assessment



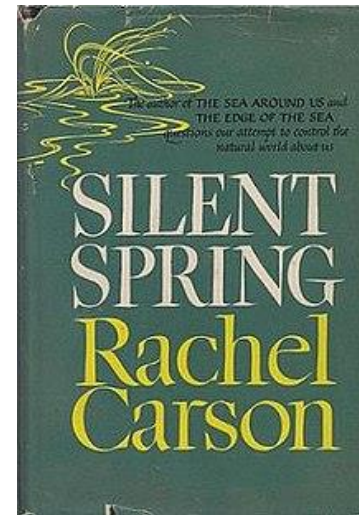
Short history of EIA

- The Agricultural and Industrial revolutions resulted in the ability for humans to exceed the previous carrying capacity of the land
 - Escaping 'Malthusian checks'
- Populations exploded, resulting in increased pressure on the natural environment and its resources



Short history of EIA

- Increased awareness of exploitation of the environment in the US (and elsewhere) and the impacts on nature and public health led to increased activism and environmentalism and development of 'Sustainable Development'



'Silent Spring' Is Now Noisy Summer

**Pesticides Industry
Up in Arms Over
a New Book**

By JOHN M. LEE

The \$300,000,000 pesticides industry has been highly irritated by a quiet woman author whose previous works on science have been praised for the beauty and precision of the writing.

The author is Rachel Carson, whose "The Sea Around Us" and "The Edge of the Sea" were best sellers in 1951 and



**Rachel Carson Stirs
Conflict—Producers
Are Crying 'Foul'**

fending the use of their products. Meetings have been held in Washington and New York. Statements are being drafted and counter-attacks plotted.

A drowsy midsummer has suddenly been enlivened by the greatest uproar in the pesticides industry since the cranberry scare of 1959.

Miss Carson's new book is entitled "Silent Spring." The

The New York Times

NEW YORK, THURSDAY, APRIL 21, 1970

Millions Join Earth Day Observances Across the Nation



ALLAN E. SETTLE,

Director of Public Relations
Manufacturing Chemists Association
Washington, D. C.

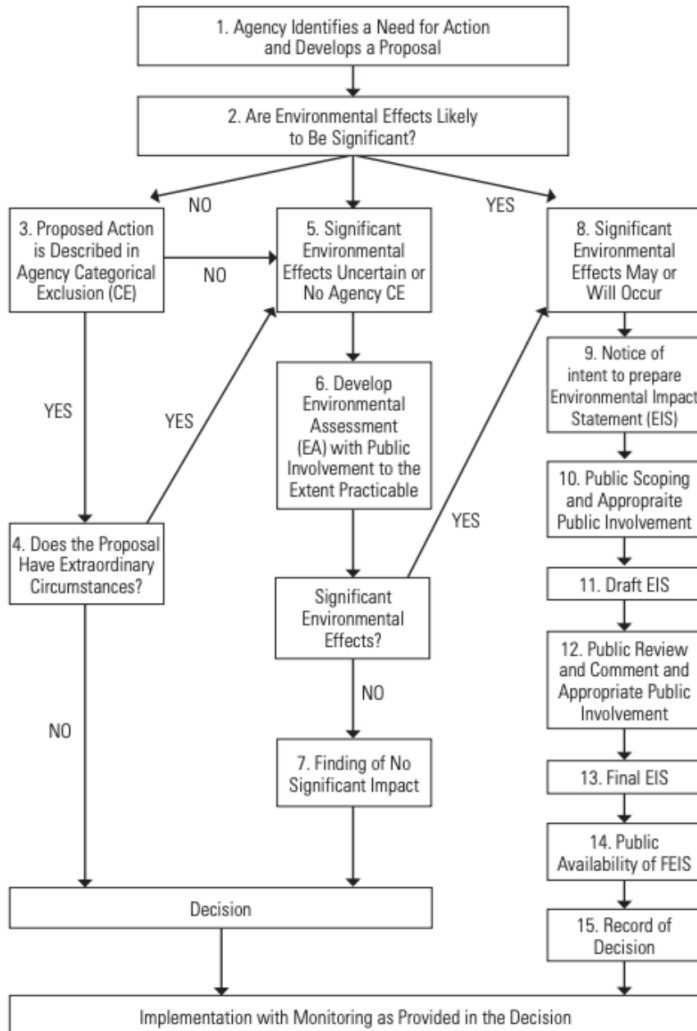
Public Opinion and Community Involvement

A poll conducted by Opinion Research Corp. in 1965 has indicated to the chemical industry that there is substantial public concern with air pollution only in areas where the problem is critical, that industries are considered among the prime villains, and that there is only limited public awareness of industrial efforts to deal with pollution problems and of the economic factors in community pollution control programs. Other surveys have also pointed to rising public concern with industrial pollution, coupled with a lack of understanding of the problem. The chemical industry believes that pollution control programs will be greatly handicapped without widespread public understanding and support.

Source: Allan E. Settle (1966) Public Opinion and Community Involvement, Journal of the Air Pollution Control Association, 16:9, 490-491

Short history of EIA

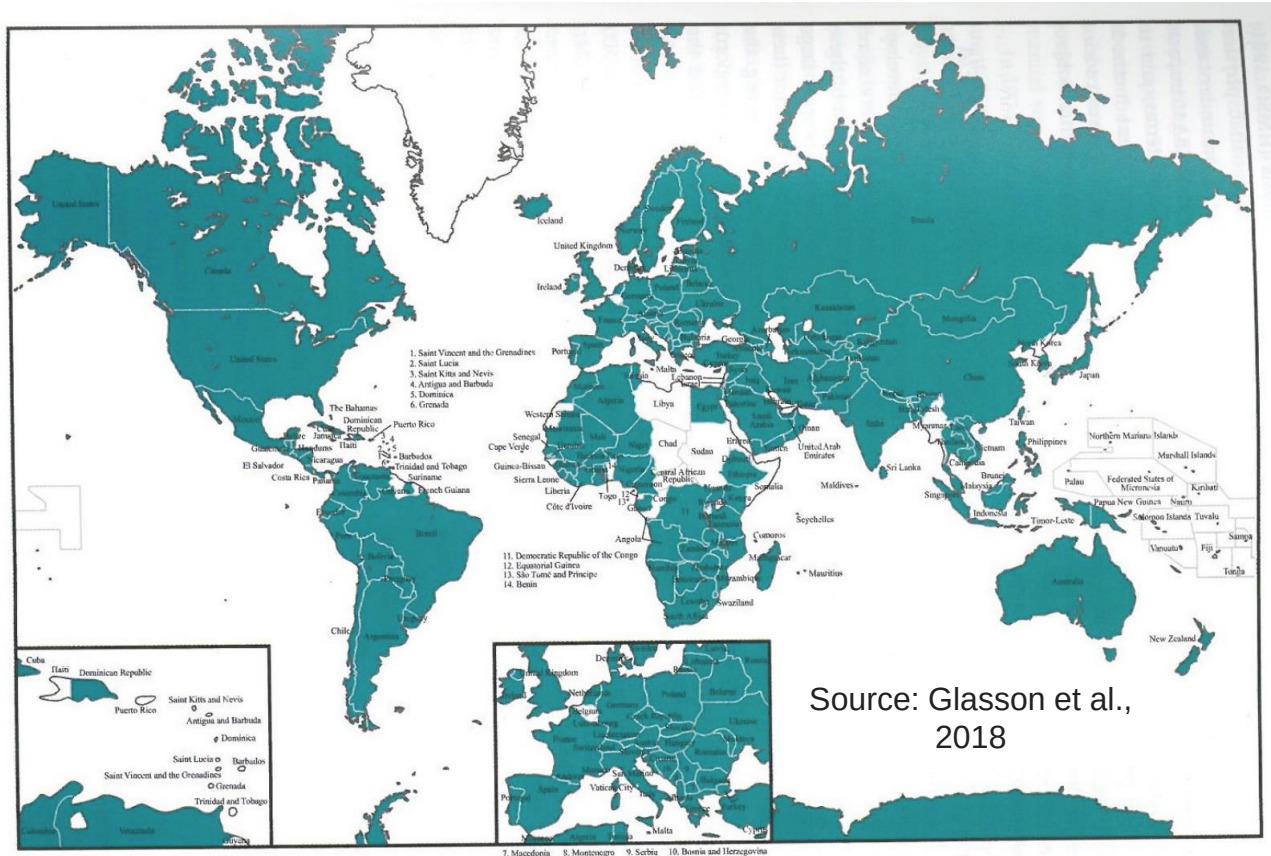
The NEPA Process



- US set up NEPA in 1969, first time agencies had to investigate and document potential impacts to the environment
 - First time legislative action at federal level was required to consider the environment when conducting certain projects
 - establishment of the Council on Environmental Quality (CEQ)
 - Regulations and guidance
 - First time policy included non-government stakeholders, specifically the public.
 - A procedural process to guide decision-making for developers
 - An Environmental Assessment may need to be conducted
 - An Environmental Impact Statement (EIS) may need to be prepared
- "the 1970s absolutely must be the years when America pays its debt to the past by reclaiming the purity of its air, its waters, and our living environment."



Short history of EIA



- Slow uptake of mandatory EIA's between 1970 and 1985:
- Canada in 1973, Australia and New Zealand in 1974, West Germany in 1975, and France in 1976
- While they vary in scope and format, the requirement for an EIA has now spread globally.

- Despite some early scepticism, the UK eventually took on the requirement for EIAs in 1988, under the European Commission.

EIA Definition



Environmental Impact Assessment (EIA)



Convention on
Biological Diversity

Introduction	EIA* is a systematic process that seeks to identify and evaluate the potential environmental consequences, impacts (and to a lesser extent the social and economic impacts also) and effects of a proposed project, such that information can be provided to decision-makers and other stakeholders in order to minimise, mitigate, or eliminate altogether, any adverse potential impacts arising from the proposed development project^{3,43-47}. EIA is often embedded in national planning policy and law, and is therefore a pre-requisite for some types of development proposals prior to development consent being granted. For example, in the UK the EIA process is driven by European law, and has a specific European Directive assigned to it; this is then integrated into UK legislation by further regulations^{48,49}.
Key features	✓ Ensure that projects are sustainable and do not detrimentally affect people's lives or the natural environment (using mitigation measures to achieve this where necessary). ✓ Aid the understanding of consequences or impacts of proposed projects on the environment – the outcome of an EIA is reported in an Environmental Statement (ES). ✓ Identify ways in which projects can be improved, for example, by minimising negative environmental impacts⁴³.
Key questions	<i>What impact will the proposed project have on the natural environment, local environment and local communities? What measures can be prescribed to avoid, reduce or compensate for environmental effects after implementation of the project?</i>
Examples	– The Mekong River Trans-boundary EIA⁵⁰ – Offshore drilling, the Falkland Islands (http://www.fogl.com/fogl/dlibrary/panda/eis_full.pdf) – Jebel Ali Power and Desalination Station M, Dubai, UAE (http://www.agaportal.de/pdf/nachhaltigkeit/eia/eia_dubai_kraftwerk.pdf)

Source: Ling, Matthew A., et al. An Introduction to Environmental Assessment. UNEP, 2015.

“a tool used to identify the environmental, social and economic impacts of a project prior to decision-making. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers.”

Source: Convention on Biological Diversity. <https://www.cbd.int/impact/whatis.shtml>



Cyfoeth Naturiol Cymru
Natural Resources Wales

“a process for identifying the positive and negative environmental effects of proposed developments. It applies to projects which are likely to have significant effects on the environment because of their nature, size or location. The developer submits the EIA report along with the proposal to the decision makers (e.g. the local planning authority if planning permission is needed), and the decision makers consider the EIA along with the plan when deciding whether to grant consent.

Source: NRW (<https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/advice-for-developers/environmental-assessment>)

Why EIA is important

- Reducing the burden of environmental impacts is necessary if development is to become sustainable.
- These impacts are more complex, larger in scale and further reaching in their potential consequences than thirty years ago when EIA was first introduced.
- As a result, EIA has become of ever increasing importance as a tool for development decision-making.



Why EIA is important

- In practice, EIA is applied primarily to prevent or minimise the adverse effects of major development proposals, such as a power station, dams and reservoirs, industrial complexes, etc.
- This process is also used as a planning tool to promote sustainable development by integrating environmental considerations into a wide range of proposed actions.



Environmental crisis in the industrial economies

- 1952 “killer fog” kills 4,000 in London
- 1963 Rachel Carson’s *Silent Spring* documents the negative effects of DDT
- 1966 Cayahoga River in Ohio catches fire





1966: New York City buried under a sea of smog.

**Cuyahoga River burns in 1966 (3rd time). Cleveland, Ohio, U.S.
“30 Years of Environmental Progress,” USEPA, 2000.**



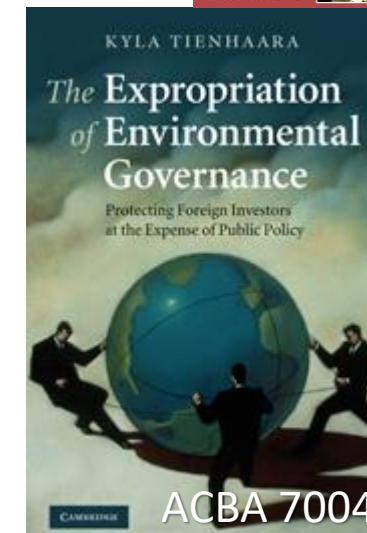
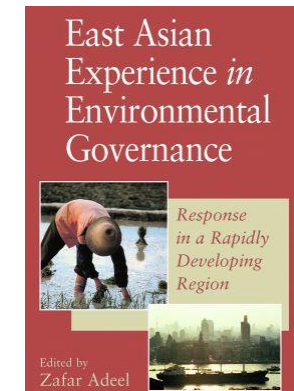
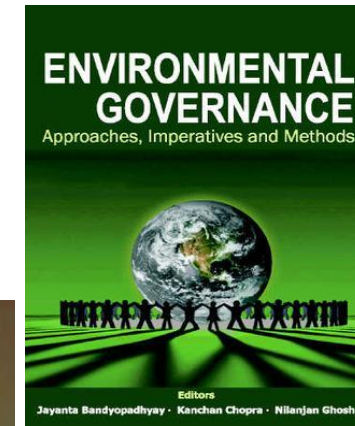
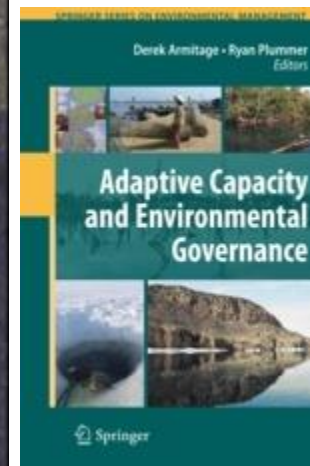
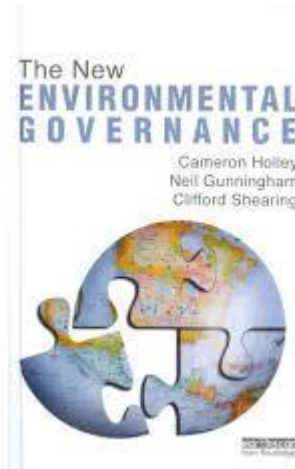
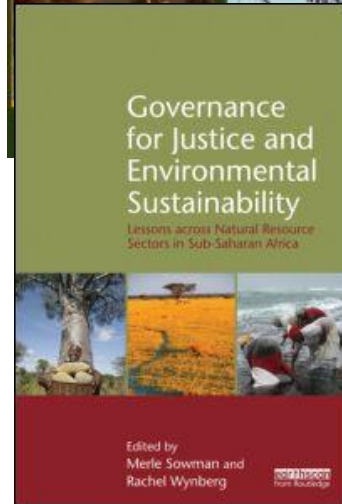
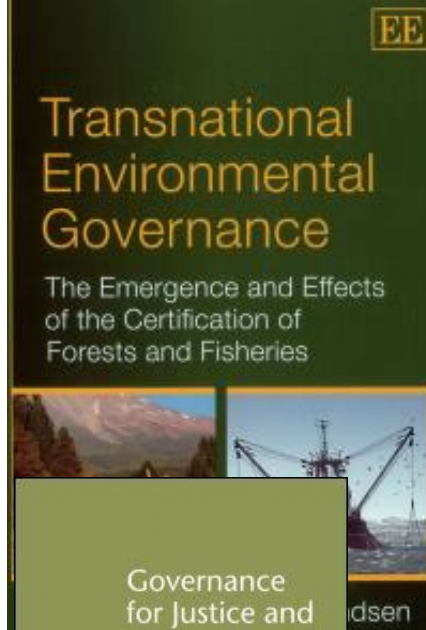
Major trends in EIA		
Phase	Time	Key Events
Introduction and early development	1970-1975	Mandate and foundations of EIA established in the USA; then adopted by a few other countries (e.g. Australia, Canada, New Zealand); basic concept, procedure and methodology still apply.
Increasing scope and sophistication	mid '70s to early '80s	More advanced techniques (e.g. risk assessment); guidance on process implementation (e.g. screening and scoping); social impacts considered; public inquiries and reviews drive innovations in leading countries; take up of EIA still limited but includes developing countries (e.g. China, Thailand and the Philippines).
Process strengthening and integration	early '80's to early '90s	Review of EIA practice and experience; scientific and institutional frameworks of EIA updated; coordination of EIA with other processes, (e.g. project appraisal, land use planning); ecosystem-level changes and cumulative effects begin to be addressed; attention given to monitoring and other follow-up mechanisms. Many more countries adopt EIA; the European Community and the World Bank respectively establish supra-national and international lending requirements.
Strategic and sustainability orientation	early '90s to date	EIA aspects enshrined in international agreements (see Section 2 – Law, policy and institutional arrangements); marked increase in international training, capacity & building and networking activities; development of strategic environmental assessment (SEA) of policies and plans; inclusion of sustainability concepts and criteria in EIA and SEA practice; EIA applied in all OECD countries and large number of developing and transitional countries.
Source: updated and amended from Sadler, 1996		

Evolution of EIA

- early 1970s – initial development
- 1970s to 1980s – increasing scope
- mid to late 1980s – process strengthening and policy integration
- mid 1990s – towards sustainability (SEA, Biodiversity)

Regions	Major Environmental Issues
Africa	The continent has the world's poorest and most resource dependent population. It carries the highest health burden due to severe environmental problems. These include desertification and soil degradation, declining food security, and increasing water scarcity.
Asia and Pacific	Rapid economic growth, urbanization and industrialization have helped in poverty alleviation but also increased pressure on land and water resources, widespread environmental degradation and high pollution levels. Mega- cities are a particular focus of environmental and health concerns.
Eastern Europe and Central Asia	Despite progress with economic restructuring and environmental clean up, there is a legacy of industrial pollution and contaminated land during communist era. In many areas, emissions of particulates, SO ₂ , lead, heavy metals and toxic chemicals continue to expose the residents to health risks.
Latin America and the Caribbean	Approximately three-quarters of the population live in urban areas. Many cities are poor, overcrowded, polluted and lack basic infrastructure. The major environmental issue is the destruction of tropical forests and consequent loss of biodiversity, which is especially serious in the Amazon basin.

Increasingly significant

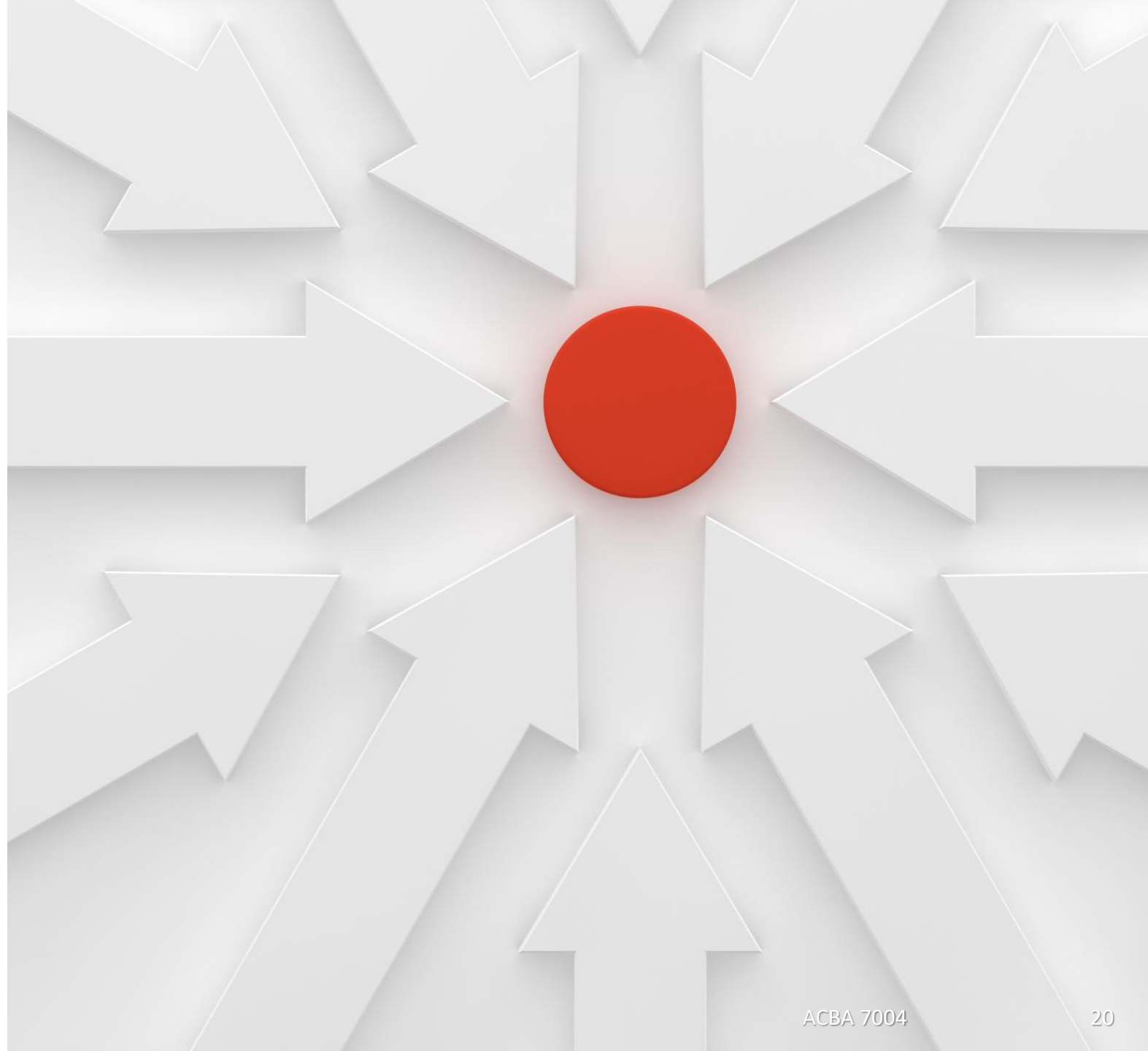


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What are the aims and objectives of EIA?

The aims and objectives of EIA can be divided into two categories.

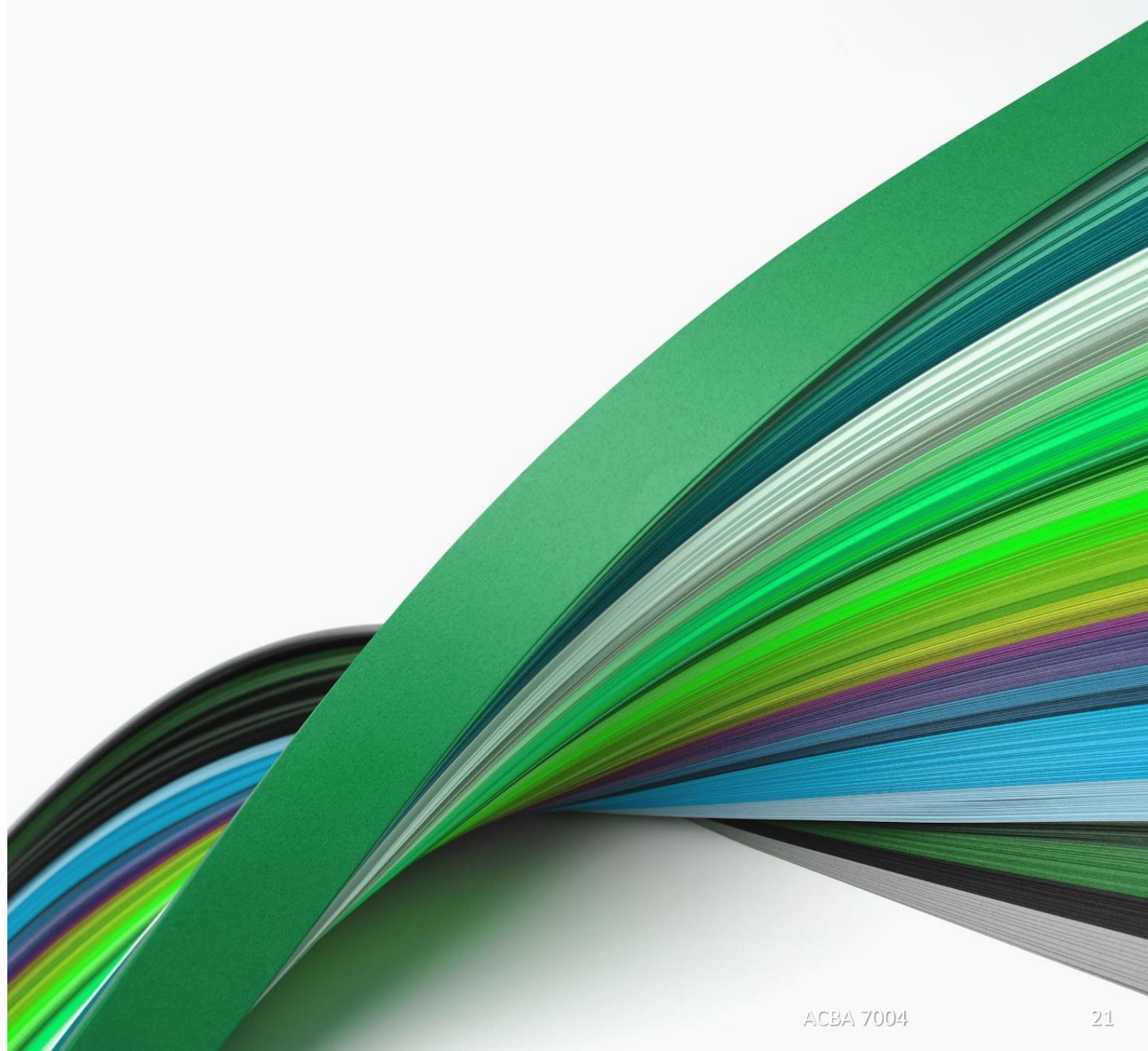
- The immediate aim and ultimate (long term) aim
- The immediate aim of EIA is to inform the process of decision-making by identifying the potentially significant environmental effects and risks of development proposals.
- The ultimate (long term) aim of EIA is to promote sustainable development by ensuring that development proposals do not undermine critical resource and ecological functions or the wellbeing, lifestyle and livelihood of the communities and peoples who depend on them.



Immediate objectives of EIA are

To

- improve the environmental design of the proposal;
- ensure that resources are used appropriately and efficiently;
- identify appropriate measures for mitigating the potential impacts of the proposal; and
- facilitate informed decision making, including setting the environmental terms and conditions for implementing the proposal.



Long term objectives of EIA are

To:

- protect human health and safety;
- avoid irreversible changes and serious damage to the environment;
- safeguard valued resources, natural areas and ecosystem components;

and

- enhance the social aspects of the proposal.



Fundamental Approach to Environmental Impact Assessment (EIA)

BASIC CONCEPTS OF EIA :

- EIA is an activity designed to identify and predict the impact of a project on bio-geo-physico-chemical environment and on human health so as to recommend appropriate legislative measures, programs, and operational procedures to minimize the impact.

- EIA is an exercise to be carried out **before** any project or major activity is undertaken to ensure that it will not in any way harm the environment on a **short-term or long-term basis**.
- Any developmental activity requires EIA to be done before executed to know the effect of a proposed development on the environment.



EIA: Purpose

- To provide information for decision-making on the environmental consequences of proposed actions;

and

- To promote environmentally sound and sustainable development through the identification of appropriate enhancement and mitigation measures.

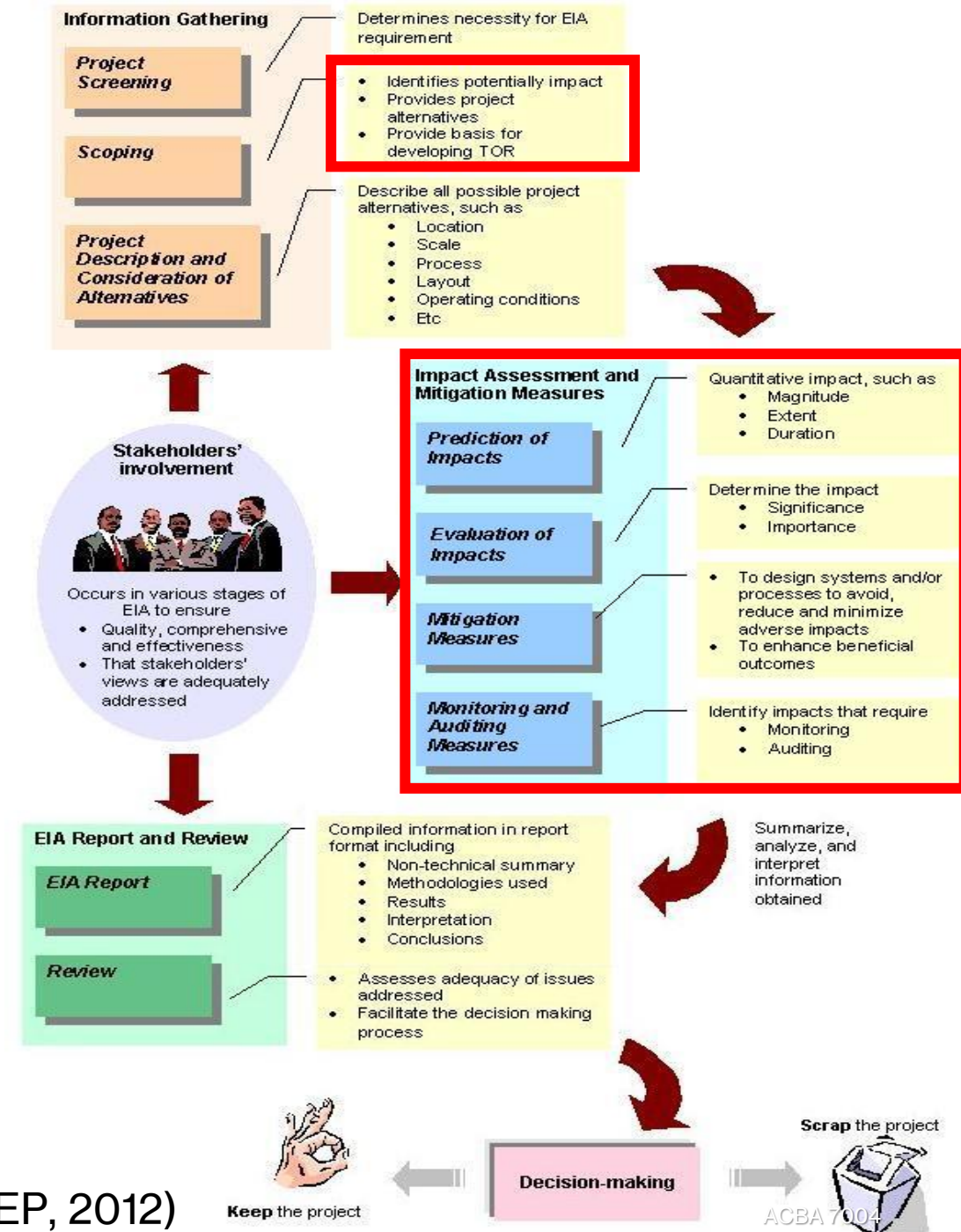


Benefits of EIA include:

- environmentally sound and sustainable design
- better compliance with standards
- savings in capital and operating costs
- reduced time and costs for approvals
- increased project acceptance
- better protection of the environment and human health



The EIA processes in sequences of application.



Impact?

In EIA, the term
“impacts” is used
instead of “effects
of activities.”

What is an
impact?

What is an impact?

The impact of an activity is a deviation (a change) from the **baseline situation** that is caused by the activity.

! To measure an impact, you must know what the **baseline situation** is.

The **baseline situation** is the existing environmental situation or condition in the absence of the activity.

The **baseline situation** is a key concept in EIA.

Environmental impacts (key words)

- type and nature
- magnitude
- extent
- timing
- duration
- uncertainty
- reversibility
- significance



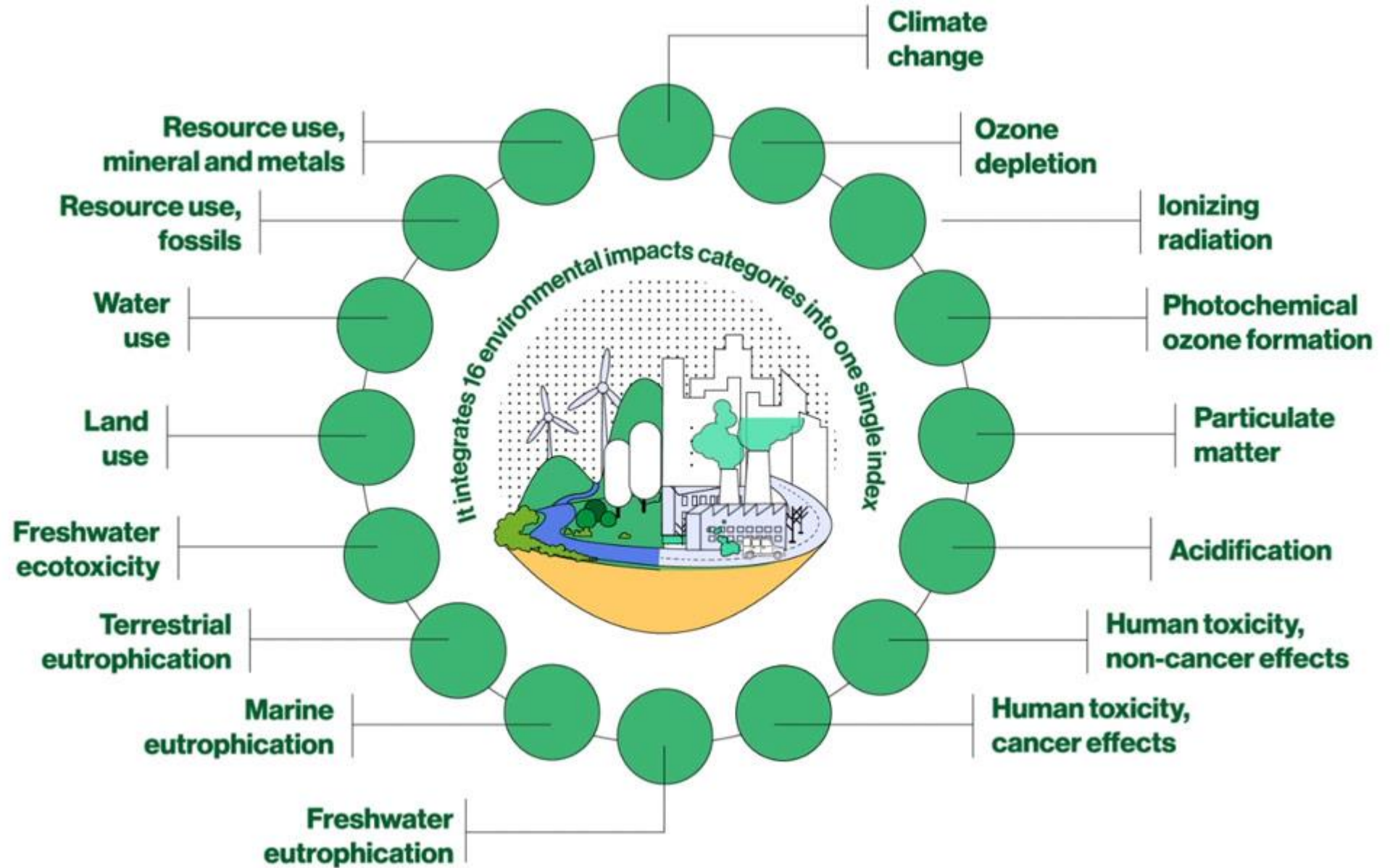
Environmental impact categories - Enviroscore (azti.es)

ILCD handbook
International Reference Life Cycle Data System



Analysis of existing Environmental
Impact Assessment methodologies
for use in Life Cycle Assessment

Background document



What is an impact?

The **impact** of an activity is the change from the baseline situation caused by the activity.

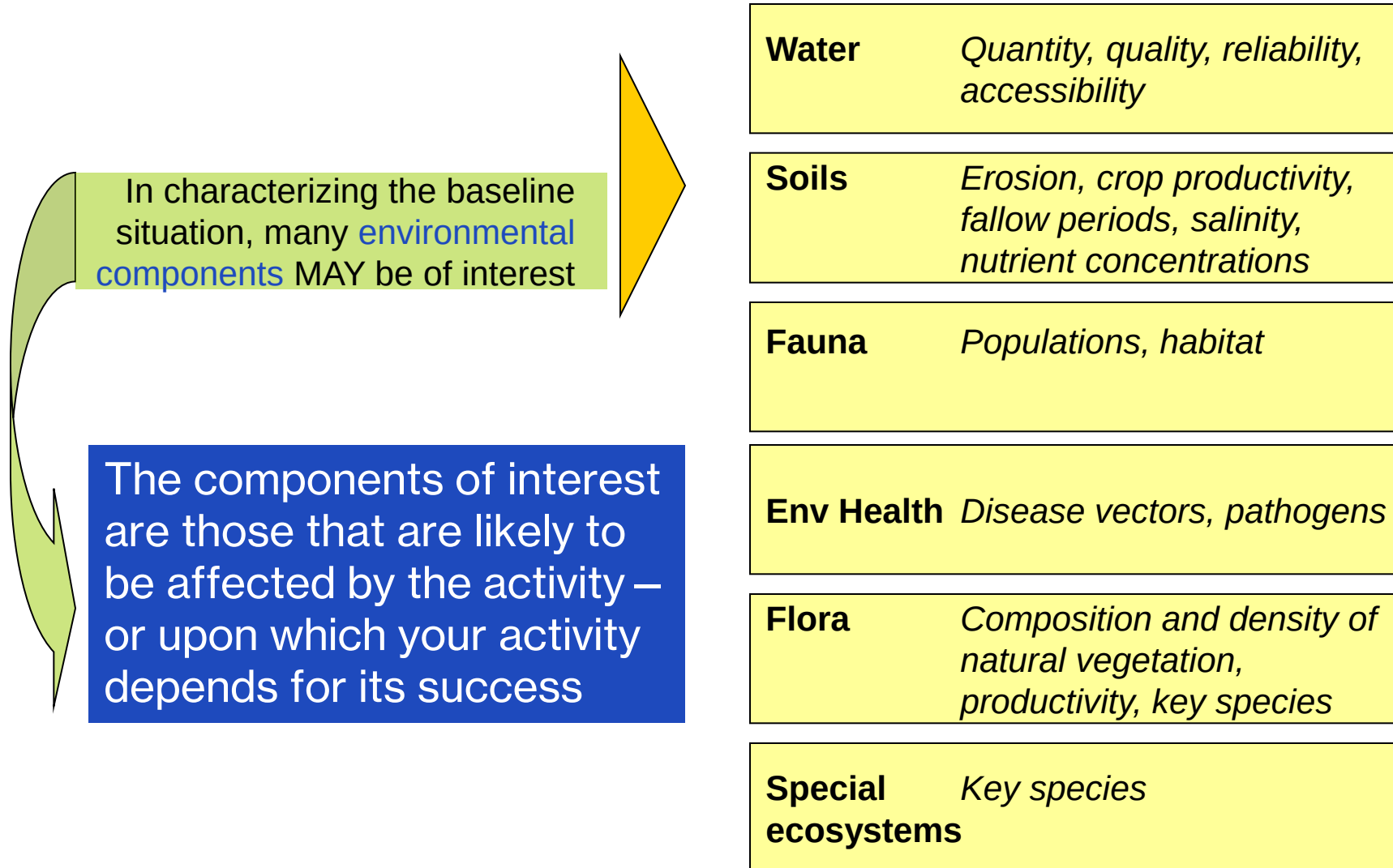
The baseline situation is the existing environmental situation or condition in the absence of the activity.

The baseline situation is a key concept in environmental impact assessment.



To measure an impact, you must know what the baseline situation is.

The baseline situation



The baseline situation

The baseline situation is not simply a “snapshot.”

Describing the baseline situation requires describing both the **normal variability** in environmental components & **current trends** in these components.



This chart of groundwater levels shows both **variability** and a **trend over time**.

Both are part of the groundwater baseline situation.

Types of impacts & their attributes

The EIA process is concerned with **all types of impacts** and may describe them in a number of ways

- * Intensity
- * Direction
- * Spatial extent
- * Duration
- * Frequency
- * Reversibility
- * Probability

Direct & indirect impacts

Short-term & long-term impacts

Adverse & beneficial impacts

Cumulative impacts

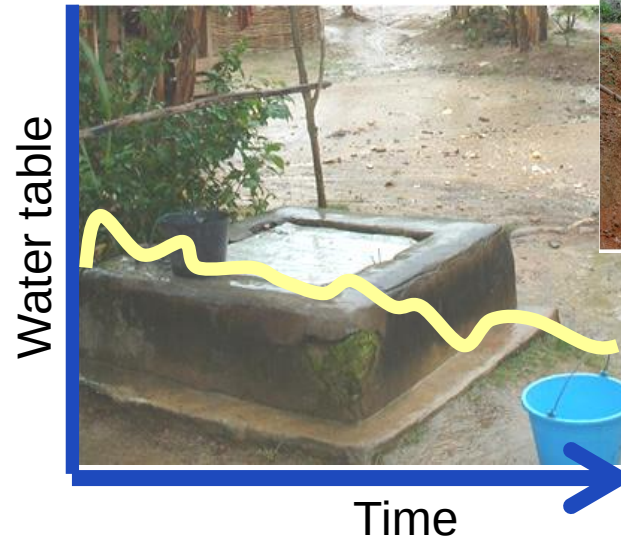
But all impacts are NOT treated equally.

Key terms in the EIA process

- Defining “impact”



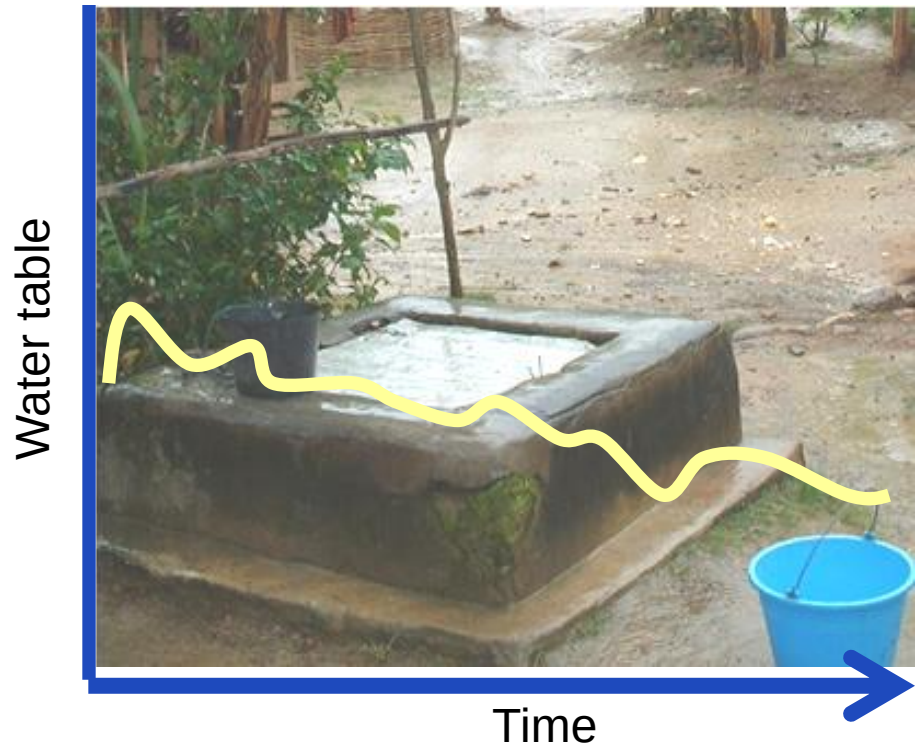
- Characterizing the baseline situation



- Defining “activity”



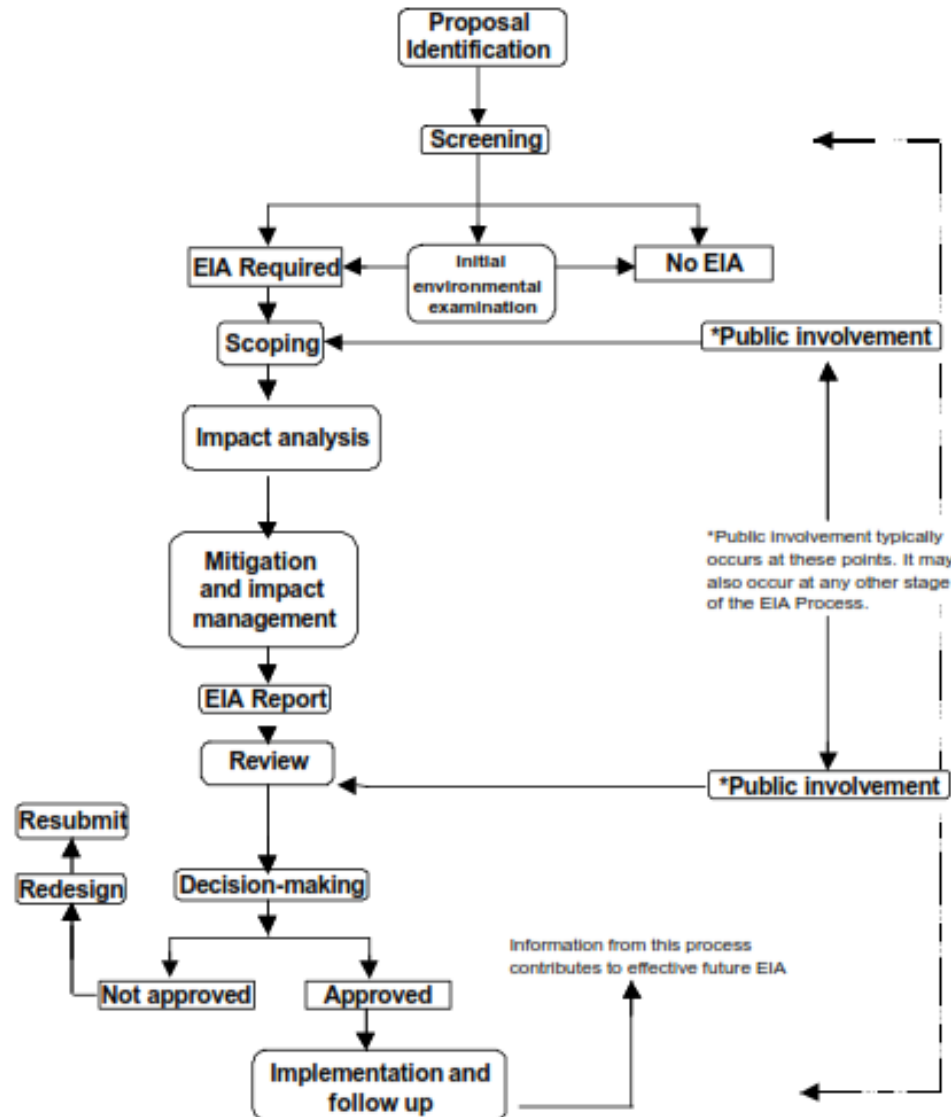
Baseline



- The baseline situation is not just a snapshot in time.
- This chart of groundwater levels shows both variability and a trend over time.
- BOTH are part of the groundwater baseline situation.

Impacts within an EIA Process Flow Chart

- Where do impacts 'sit' within the EIA process?



What is an activity?

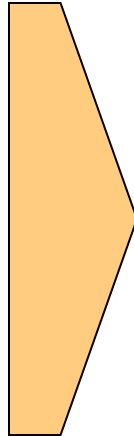
We are discussing the impacts of **activities**.
What are activities?



An activity is:

a desired
accomplishment or
output

E.g.: a road, seedling
production, or river
diversion to irrigate
land



**Accomplishing an activity
requires a set of **actions****

ACTIVITY:	ACTIONS:
market access road rehabilitation	Survey, grading, culvert construction, compaction, etc. . .

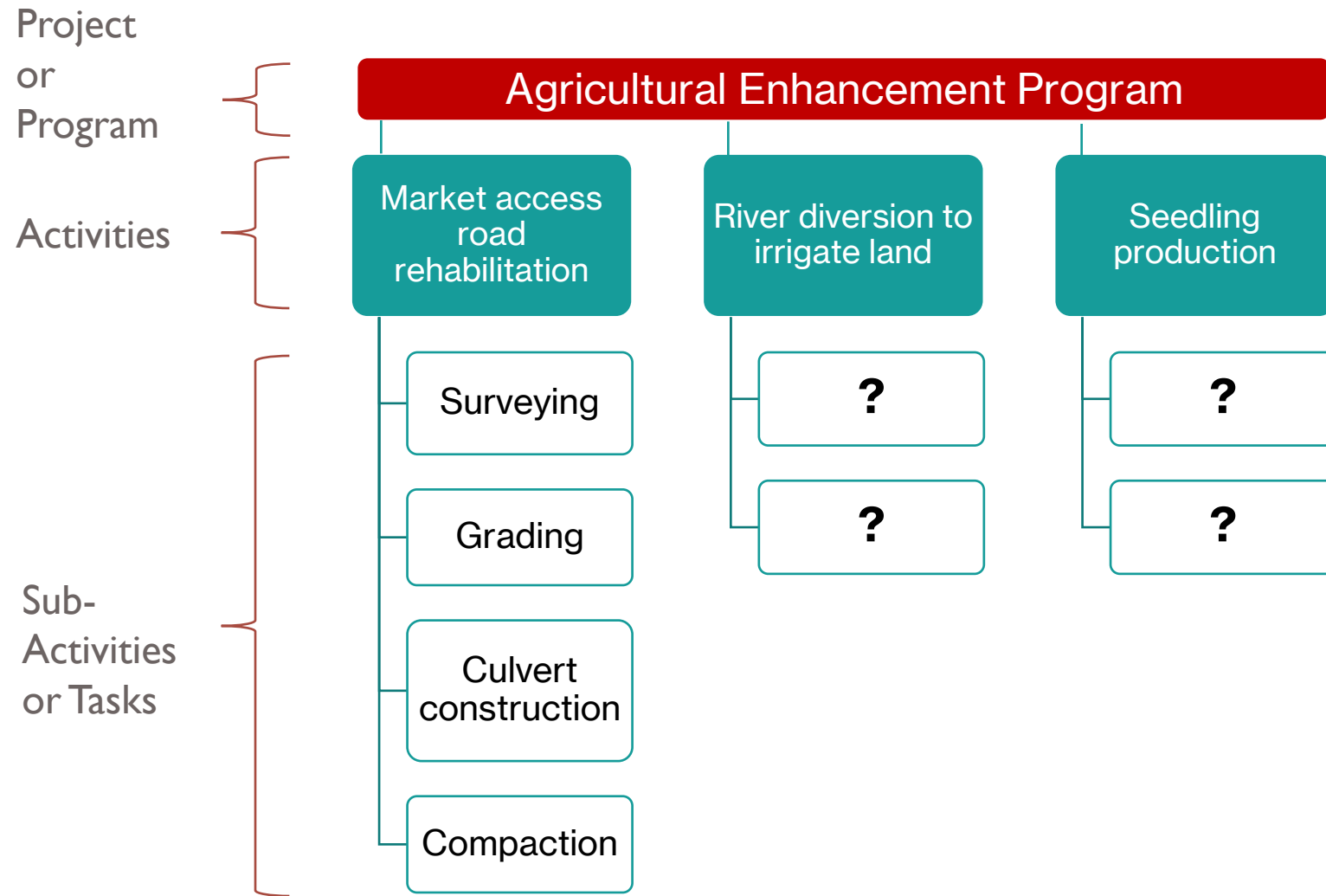
**A project or program may
consist of many activities**

What about sub-activities?

A project or program usually consists of many activities.
Accomplishing an activity requires a set of sub-activities or tasks.

ACTIVITY: Market access road rehabilitation	SUB-ACTIVITIES OR TASKS: Survey, grading, culvert construction, compaction, etc..
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Activities and sub-activities





Activity

Think about your select EIA report. Consider the following and report back to the group:

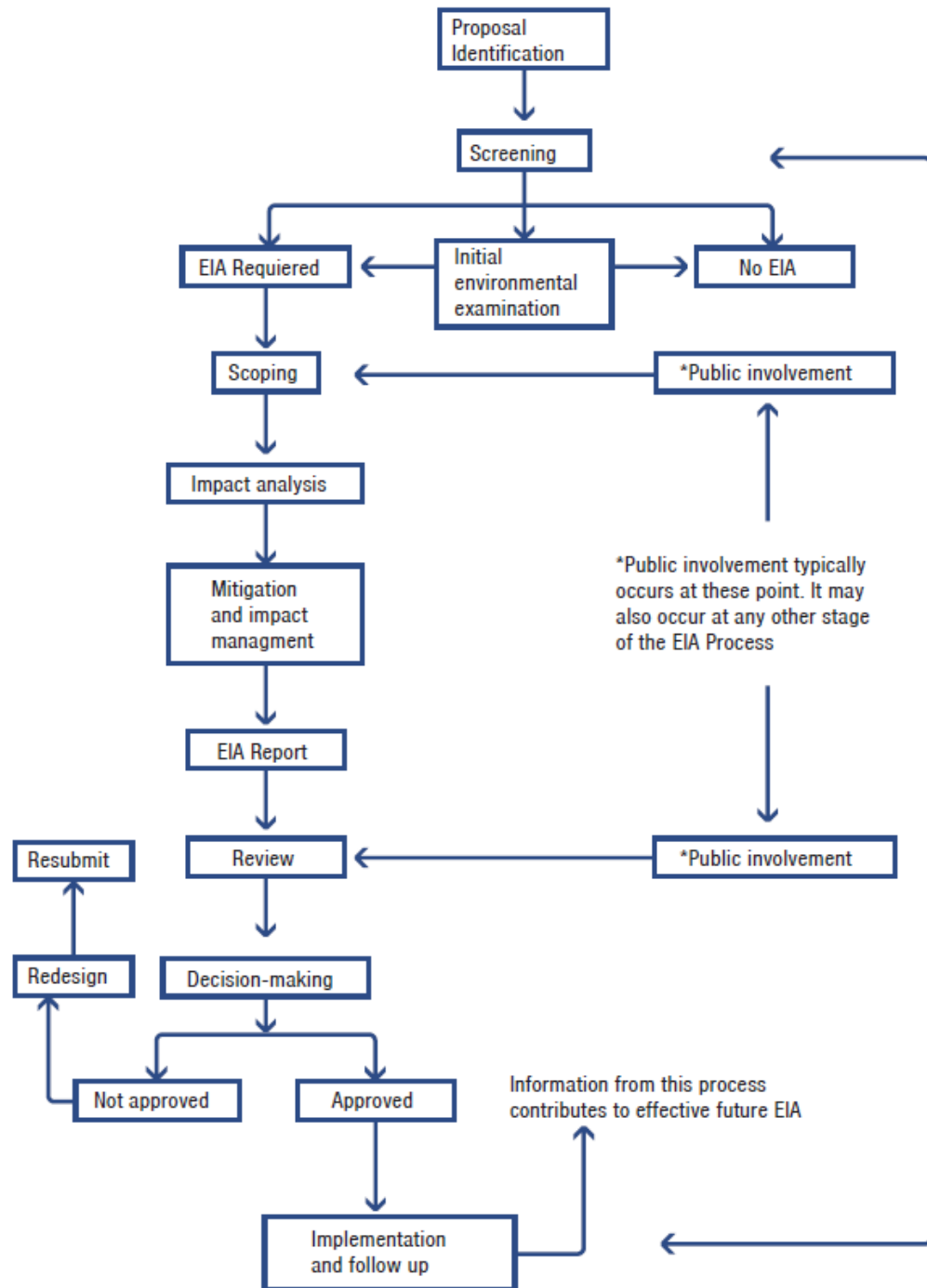
What key impacts are highlighted in your EIA? What main activity is being undertaken?



Take a break

15mins

EIA process



ElA practice and outcomes

- screens out environmentally unsound projects;
- modifies the design of feasible proposals to reduce their environmental impact;
- identifies the best practicable environmental option;
- predicts the significant adverse effects of proposals with reasonable accuracy;
- identifies mitigation measures that work successfully to avoid, reduce and offset major impacts;
- influences decision making and approvals and the implementation of terms and conditions; and
- results in environmental gains and benefits relative to other options.

Costs and benefits of EIA

Generally the earlier EIA process is introduced in the project cycle, the greater the potential returns.

- Although there are costs associated with undertaking EIA, experience has shown that the potential savings over the life of a project can repay the investment many times over.
- The savings can be economic (e.g. identification of least cost alternative) as well as environmental (e.g. impact reduction, maintaining other resource use opportunities).
- When EIA is integrated into the project preparation phase, environmental design considerations can be introduced in the first place rather than the proposal having to be modified later.



Costs and benefits of EIA

Costs

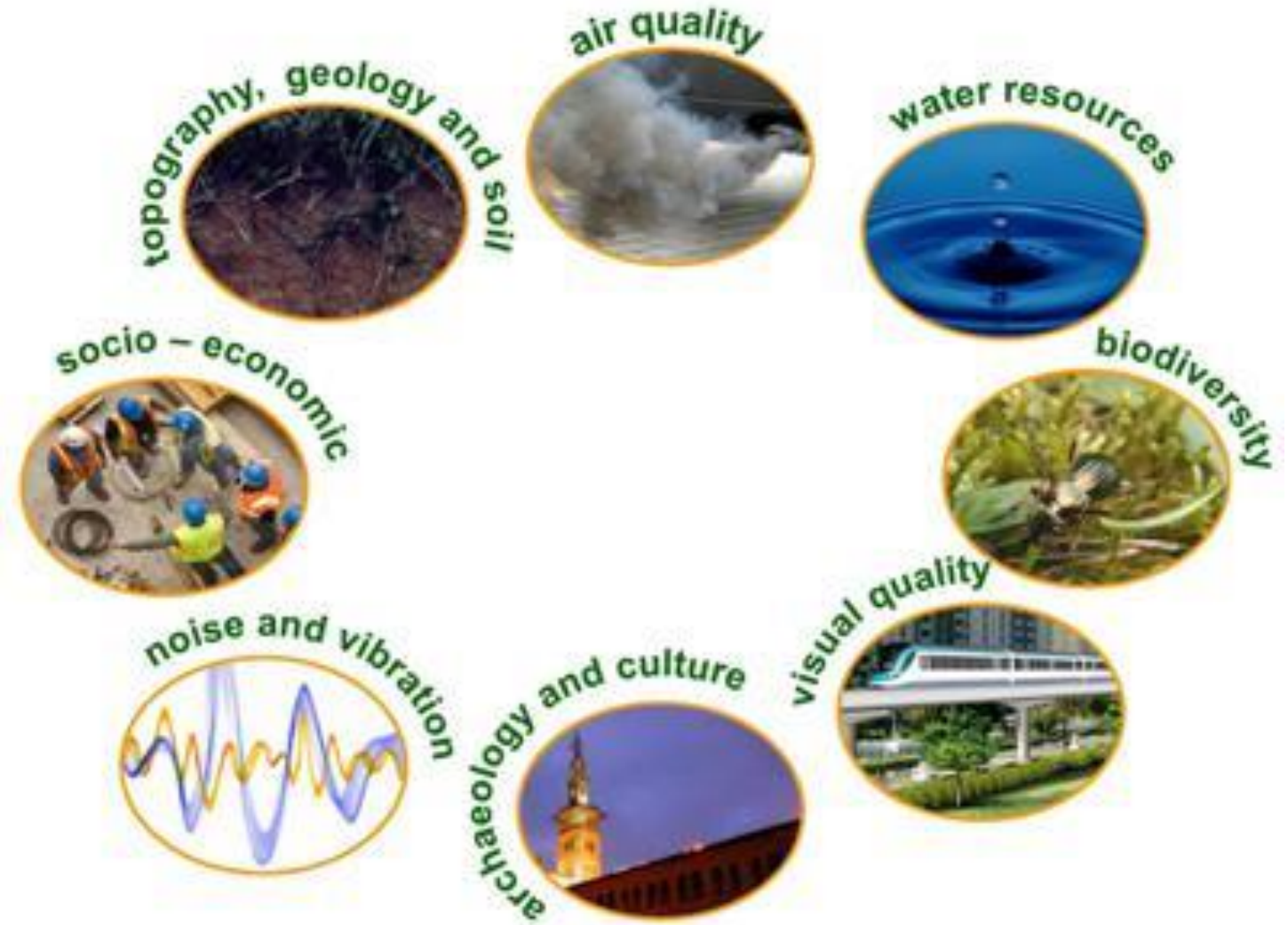
Although many proponents complain that EIA causes excessive delays in projects, many of these are caused by poor administration of the process rather than by the process itself.

These occur when:

- the EIA is commenced too late in the project cycle;
- the terms of reference are poorly drafted;
- the EIA is not managed to a schedule;
- the technical and consultative components of EIA are inadequate; and
- the EIA report is incomplete or deficient as a basis for decision making.

Why?

With all developments, there is a potential impact on the environment and SD (not necessarily negative).



Impacts of Development

- Introduction [3 mins](#)
- Direct loss of habitat - if only the footprint of the development.
- Severance - this is where the development forms a barrier and possibly divides existing habitats. This leads to fragmentation.
- Disruption to the local hydrology - including watercourse damage, polluted run-off, sedimentation and erosion.
- Disturbance of particular notable species - eg badgers, bats, owls, etc.
- Eden: [environmental assessment](#)
 - [://www.youtube.com/watch?v=9xTxA4y6ctg](https://www.youtube.com/watch?v=9xTxA4y6ctg)

Principles

- **The eight guiding principles...**
- There are eight guiding principles that govern the entire process follows:
- **Participation:** An appropriate and timely access to the process for all stakeholders.
- **Transparency:** All assessment decisions and their basis should be made available to all participants.
- **Certainty:** The process and timing of the assessment should be followed by all participants.
- **Accountability:** The decision-makers are responsible to all parties for the decisions under the assessment process.
- **Credibility:** Assessment is undertaken with professionalism and integrity.
- **Cost-effectiveness:** The assessment process and its outcomes should be achieved at the least cost to the society.
- **Flexibility:** The assessment process should be able to adapt to changing circumstances and proposal and decision making situation.
- **Practicality:** The information and outputs provided by the assessment should be readily usable in decision making and planning.





Historical Development

- NEPA – National Environmental Policy Act 1969 in the USA
 - Required federal agencies to carry out environmental assessment of policies and activities.
 - Driving force of environmental law and assessment (Holder, 2007)

Background



Background

Historical Development

- 1973 – First Environmental Action Plan from the European Commission highlighted the importance of Environmental Impact Assessments (EIAs)
- 1985 – Directive (85/337/EEC) EIA procedures were mandated at project level
- Previously EIAs were voluntary or carried out due to local authority request
(Glasson *et al*, 2019)

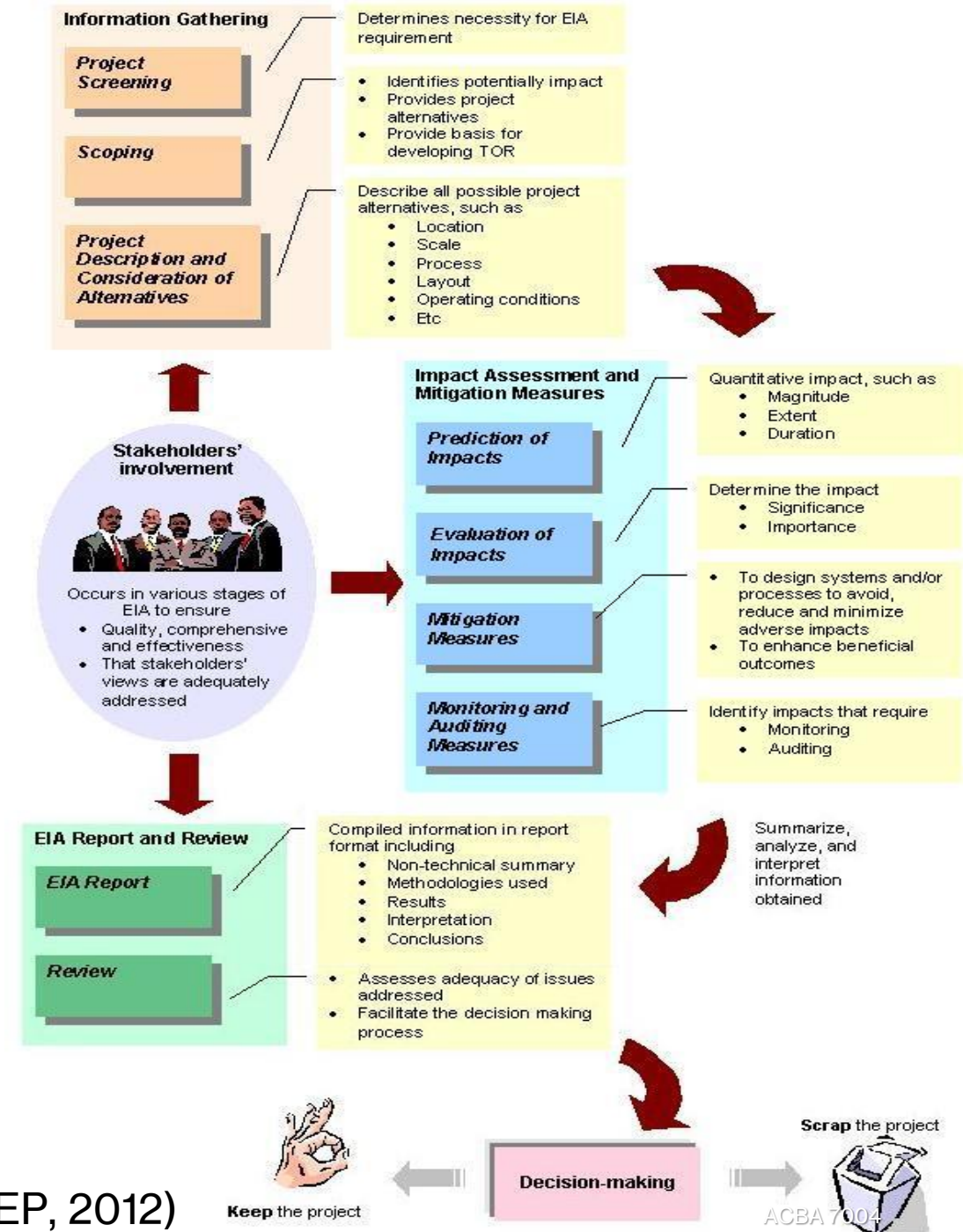
Process of conducting an EIA

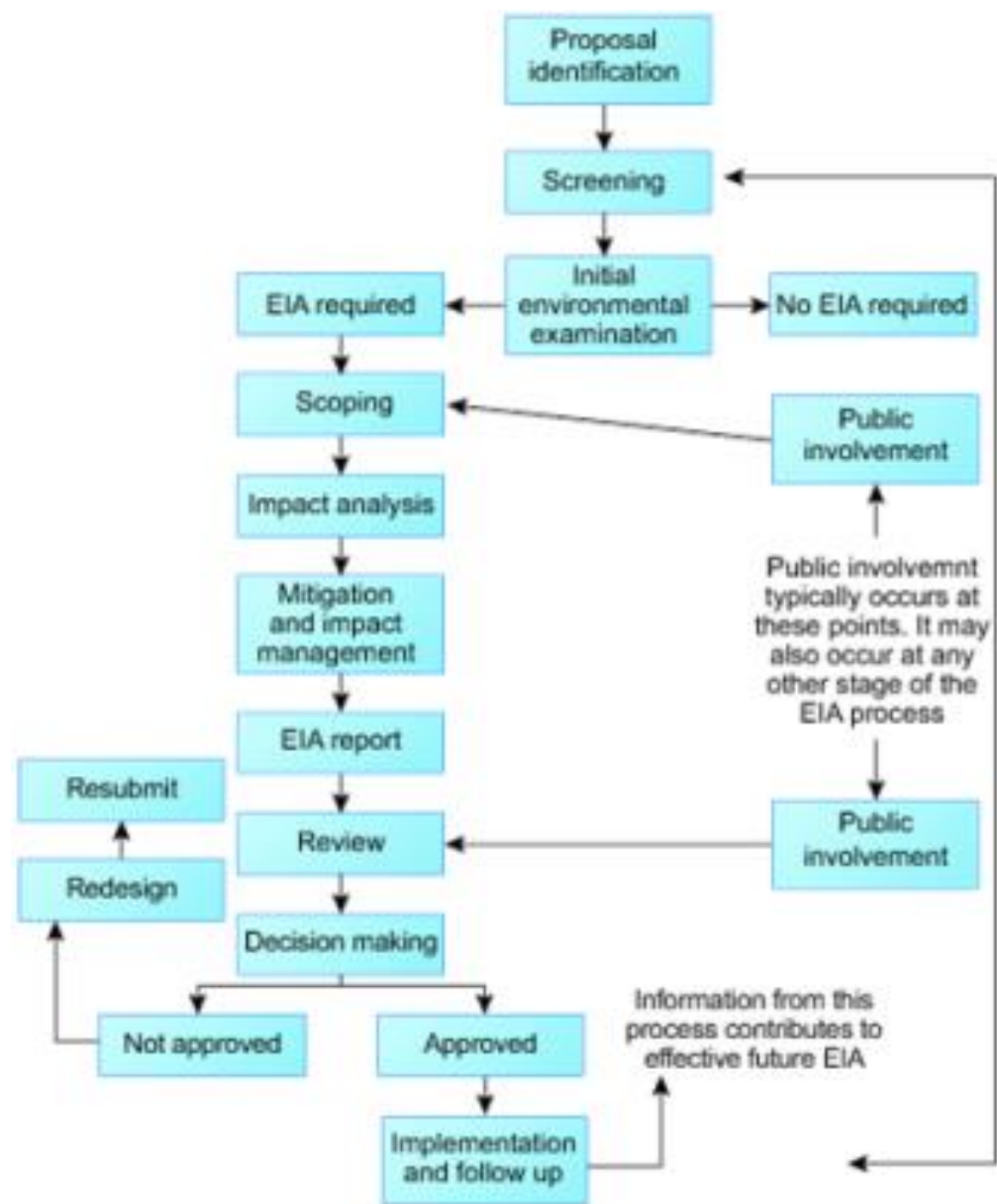
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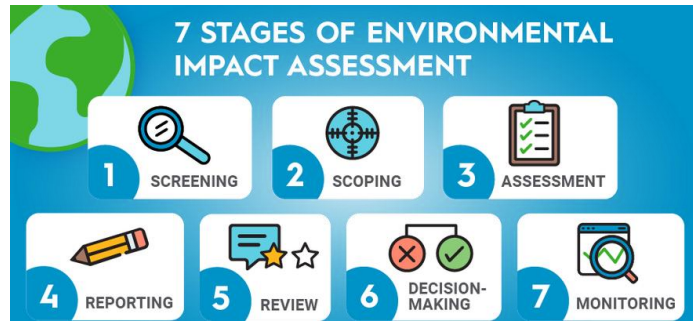


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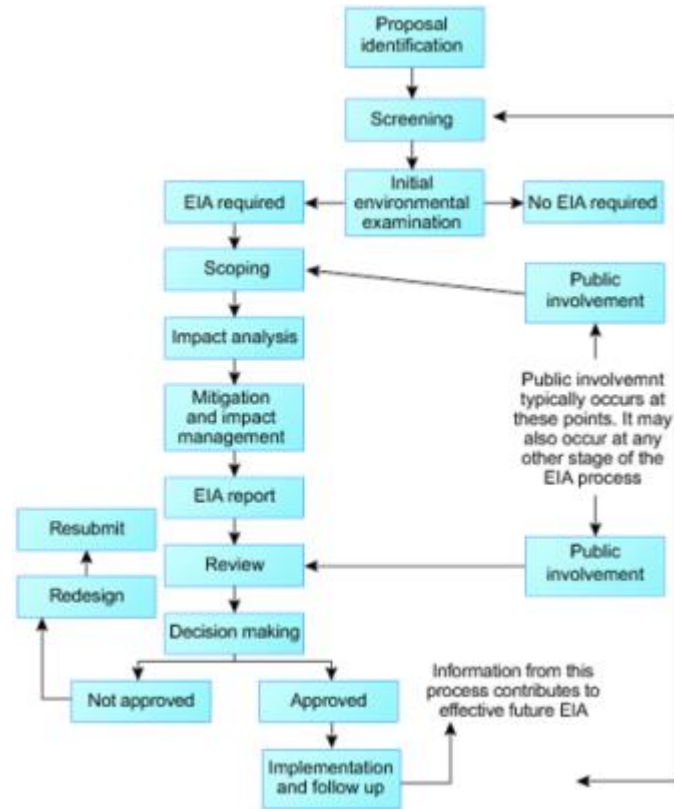
The EIA processes in sequences of application.







While the legislative guidelines varies slightly for each country, the process often follows similar steps / stages.



Stage

What's involved

1. Screening

Deciding if an EIA is required

2. Scoping

Deciding what needs to be covered in the assessment and reported in the ES

3. Assessment and Report

The ES has to include the likely significant environmental effects of the development

4. Review of Application

The ES and development application must be publicised so interested parties and the public have the opportunity to give their views on it.

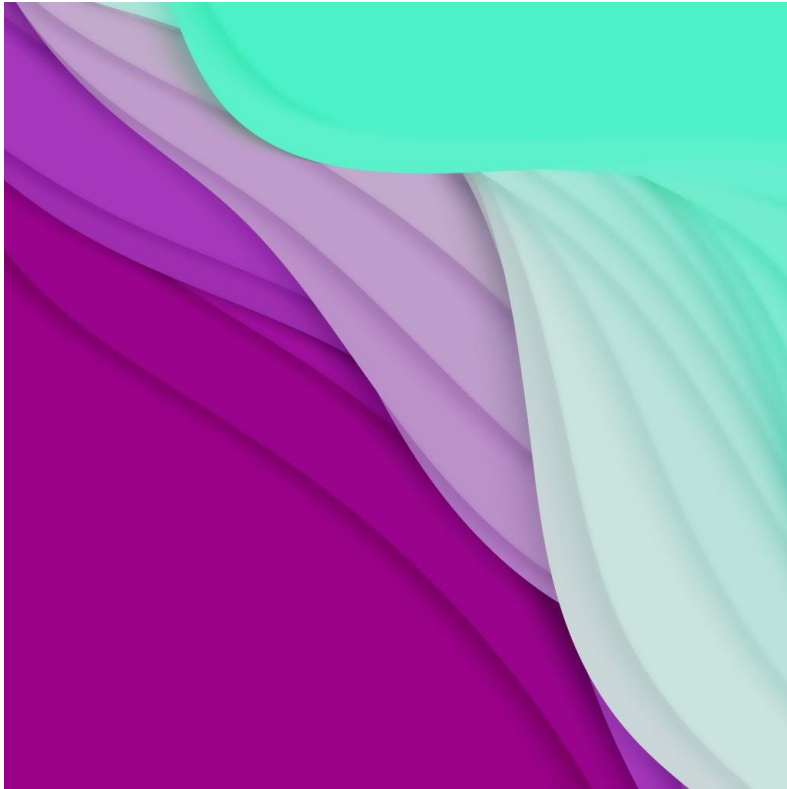
5. Decision

The ES and any comments made on it must be taken into account by the competent authority before they decide whether to give consent.

6. Implementation and monitoring

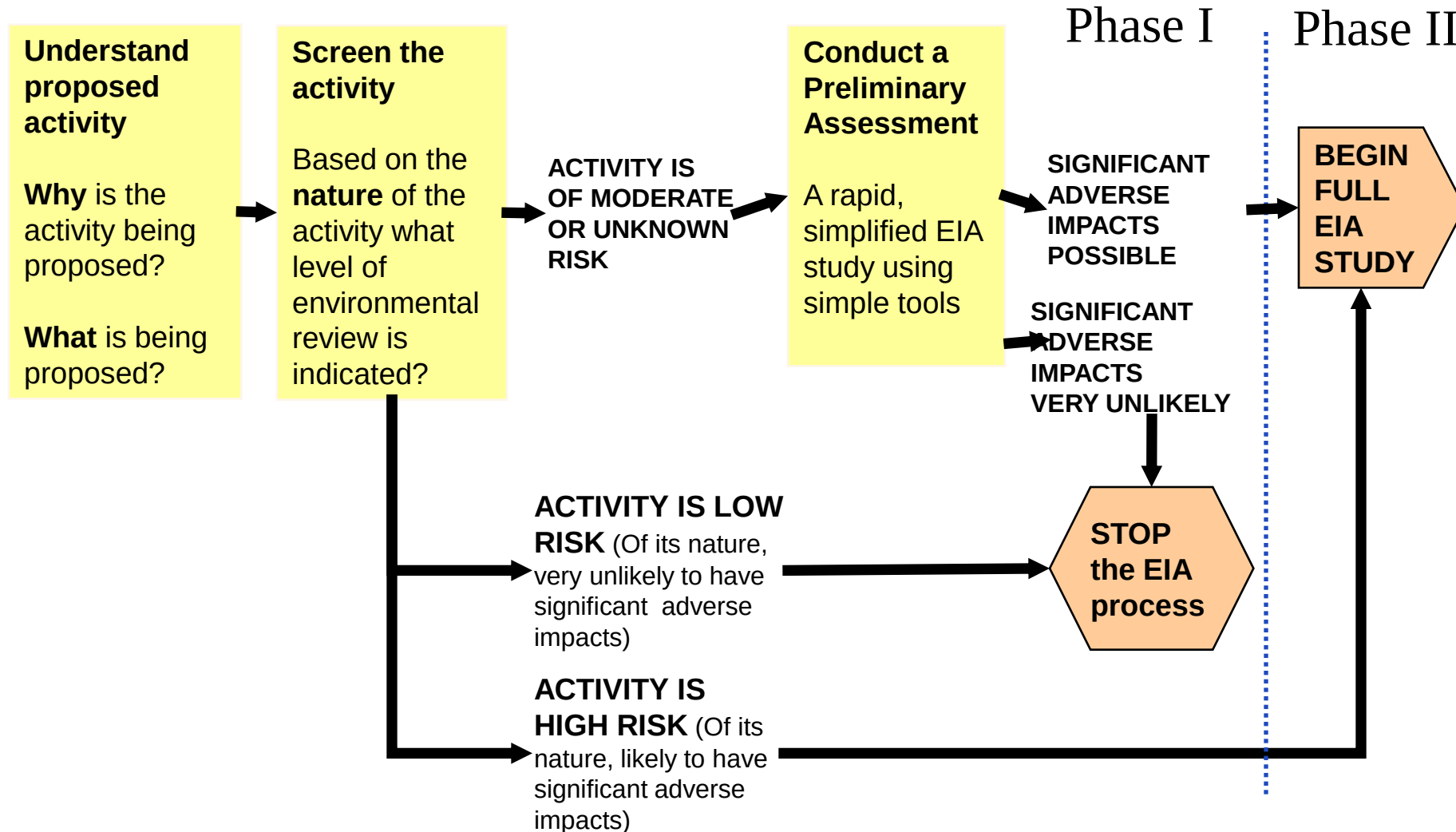
The developer must commence any monitoring required by the competent authority.

Screening



- EIA is required for some types of development, but not others.
- Deciding whether an EIA is required is known as “screening” and can be a source of major dispute between developers, communities and local authorities.
- It is vital that this stage is carried out properly.
- When undertaking screening, the regulations define two different types of project: those where EIA **must** take place or where it **may** be needed.
- These are set out in two Schedules.
 - Schedule 1 projects: an EIA must always be carried out
 - Schedule 2 projects: an EIA must be carried out if the development is likely to have a significant impact on the environment by virtue of its nature, size or location.

Phase 1 of the EIA Process



Schedule 1 developments

Examples include:

- Major Power Plans
- Chemical Works
- Long Distance Railways
- Waste Disposal Incineration
- Major Road Schemes
- Major Wastewater Treatment Works
- Steel Works
- Inland waterways/ports for inland waterway traffic
- Dams
- Quarries and open case mining
- Intensive poultry / pig farm

Visit:

<https://www.legislation.gov.uk/ukxi/2017/571/schedule/1/made>

Mandatory EIA: **an EIA must always be carried out.**



Schedule 2 developments

Examples include:

- Quarries & Opencast Mines (not included in Schedule 1)
- Deep Drilling
- Surface Industrial Installations
- Urban Development Projects
- Intensive Agriculture
- Surface Storage of Fuel
- Foundries & Forges
- Coke Ovens
- Chemical Production (not included in Schedule 1)
- Manufacture of Dairy Products
- Brewing
- Abattoirs
- Rubber production
- Wastewater Treatment Plants
- Holiday Villages
- Golf Courses
- Large Scale / Groups of Wind Turbines

Visit: <https://www.legislation.gov.uk/ukxi/2017/571/schedule/2/made>

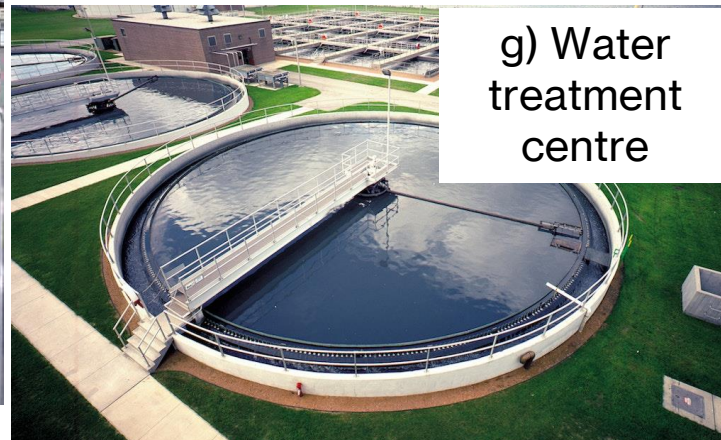
An EIA must be carried out if the development is likely to have a significant impact on the environment by virtue of its nature, size or location.

All Schedule 2 developments are based on thresholds set out in the regulations. A proposed development only becomes a Schedule 2 development where it exceeds these thresholds



Screening

QUESTION: Which of these projects do you think may require an EIA, and why?



Screening

QUESTION: Which of these projects do you think may require an EIA, and why?



a) Schedule 2, 3(a) – Energy industry: Industrial installations for the production of electricity
- Depends if greater than 0.5 ha



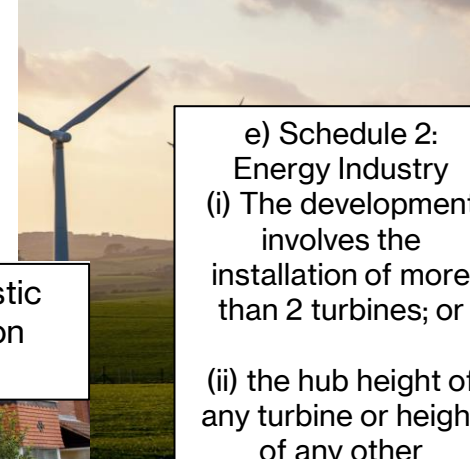
b) Schedule 2 – Golf course
- Depends if greater than 1 ha



c) Afforestation
- 2 ha if in AONB, else 0 ha if any sensitive area
- Else 5 ha



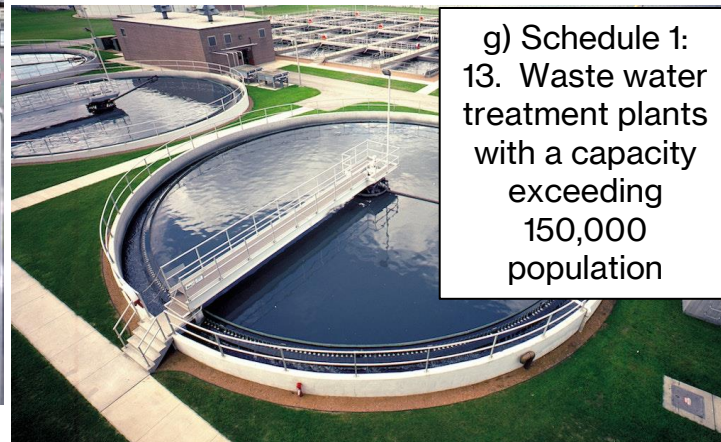
d) Domestic extension
No



e) Schedule 2: Energy Industry
(i) The development involves the installation of more than 2 turbines; or
(ii) the hub height of any turbine or height of any other structure exceeds 15 metres.



f) Schedule 1: 6. Integrated chemical installations



g) Schedule 1: 13. Waste water treatment plants with a capacity exceeding 150,000 population



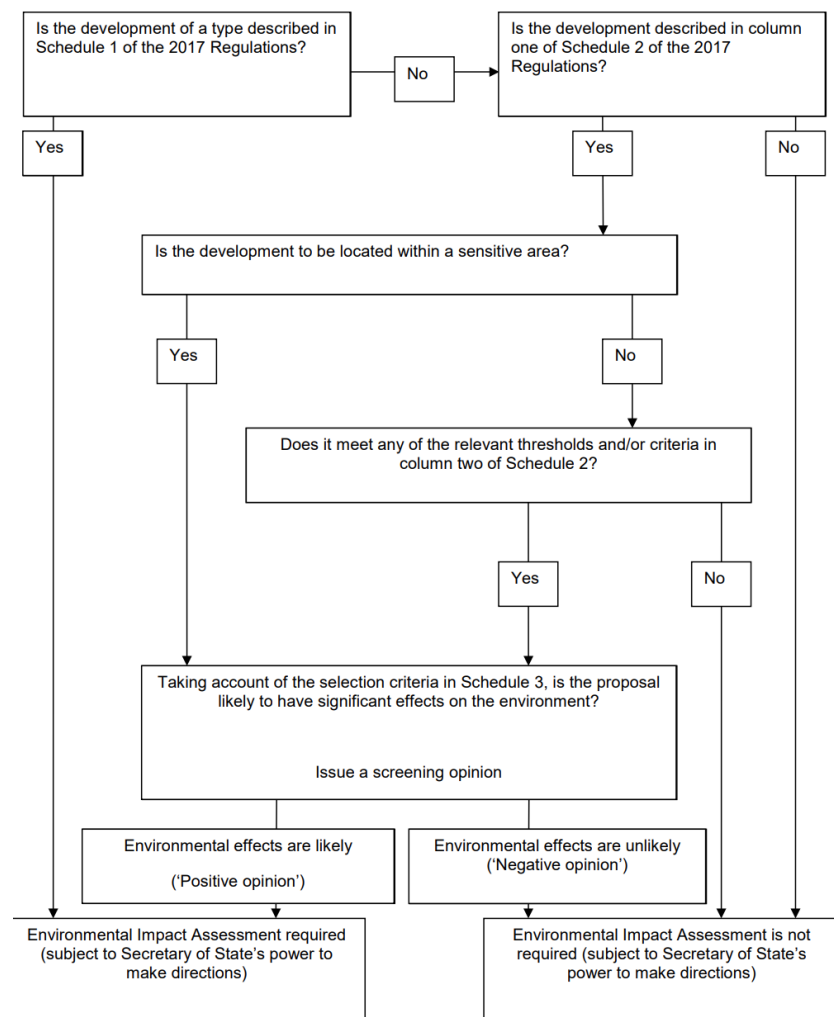
h) Schedule 2 – 7. Food industry: Manufacture of dairy products
- New floorspace exceeds 1,000 sq.m



i) Schedule 2 – 10. Infrastructure projects (b) urban development project (i) More than 1 ha

Screening Schedule 2 developments

When screening a Schedule 2 proposal for EIA, a planning authority will consider the following:



1. Is the proposed development within a category set out in Schedule 2?

2. a) Does it exceed the threshold set out for that category in Schedule 2?

Column 1 Description of development	Column 2 Applicable thresholds and criteria
1 Agriculture and aquaculture	
(a) Projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes;	The area of the development exceeds 0.5 hectare.
(b) Water management projects for agriculture, including irrigation and land drainage projects;	The area of the works exceeds 1 hectare.
(c) Intensive livestock installations (unless included in Schedule 1);	The area of new floorspace exceeds 500 square metres.
(d) Intensive fish farming;	The installation resulting from the development is designed to produce more than 10 tonnes of dead weight fish per year.
(e) Reclamation of land from the sea.	All development.
2 Extractive industry	
(a) Quarries, open cast mining and peat extraction (unless included in Schedule 1);	All development except the construction of buildings or other ancillary structures where the new floorspace does not exceed 1,000 square metres.
(b) Underground mining;	
(c) Extraction of minerals by fluvial or marine dredging;	All development.
(d) Deep drillings, in particular— (i) geothermal drilling; (ii) drilling for the storage of nuclear waste material; (iii) drilling for water supplies; with the exception of drillings for investigating the stability of the soil.	(i) In relation to any type of drilling, the area of the works exceeds 1 hectare; or (ii) in relation to geothermal drilling and drilling for the storage of nuclear waste material, the drilling is within 100 metres of any controlled waters
(e) Surface industrial installations for the extraction of coal, petroleum, natural gas and ores, as well as bituminous shale.	The area of the development exceeds 0.5 hectare.
3 Energy industry	
(a) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1);	The area of the development exceeds 0.5 hectare.
(b) Industrial installations for carrying gas, steam and hot water;	The area of the works exceeds 1 hectare.
(c) Surface storage of natural gas;	(i) The area of any new building, deposit or structure exceeds 500 square metres; or
(d) Underground storage of combustible gases;	(ii) a new building, deposit or structure is to be sited within 100 metres of any controlled waters.
(e) Surface storage of fossil fuels;	
(f) Industrial briquetting of coal and lignite;	The area of new floorspace exceeds 1,000 square metres.
(g) Installations for the processing and storage of radioactive waste (unless included in Schedule 1);	(i) The area of new floorspace exceeds 1,000 square metres; or (ii) the installation resulting from the development will require the grant of an environmental permit under the Environmental Permitting (England and Wales) Regulations 2016(2) in relation to a radioactive substances activity described in paragraphs 11(2)(b), (2)(c) or (4) of Part 2 of Schedule 23 to those Regulations, or the variation of such a permit.
(h) Installations for hydroelectric energy production;	The installation is designed to produce more than 0.5 megawatts.
(i) Installations for the harnessing of wind power for energy	(i) The development involves the installation of more than 2

Screening Schedule 2 developments

Development type	Schedule 2 criteria and thresholds	Indicative criteria and threshold	Key issues to consider
1. AGRICULTURE and AQUACULTURE Note: Agricultural operations usually fall outside the scope of the Town and Country Planning system. The descriptions below apply only to projects that are considered to be 'development' for the purposes of the Town and Country Planning Act 1990.			
(a) Use of uncultivated or semi-natural land for intensive agricultural purposes	The area of the development exceeds 0.5 hectare.	Environmental Impact Assessment is unlikely unless it covers more than five hectares.	Impacts on the surrounding ecology, hydrology and landscape
(b) Water management for agriculture, including irrigation and land drainage projects	The area of the works exceeds 1 hectare.	Permanent changes to the character of more than five hectares of land	Wider impacts on hydrology and surrounding ecosystems. Environmental Impact Assessment will not normally be required for routine water management projects undertaken by farmers.
(c). Intensive livestock installations	The area of new floorspace exceeds 500 square metres.	Installations designed to house more than 750 sows, 2,000 fattening pigs, 60,000 broilers or 50,000 layers, turkeys or other poultry.	Level of odours, increased traffic and the arrangements for waste handling.
(d). Intensive fish farming	The installation resulting from the development is designed to produce more than 10 tonnes of	Developments designed to produce more than 100 tonnes of dead weight fish per year.	Physical scale of any development, the extent of any likely wider impacts on the hydrology and

<https://assets.publishing.service.gov.uk/media/5a75aa4440f0b67f59fcea7e/eia-thresholds-table.pdf>

Due to the variability and uncertainty when determining whether a proposed project could significantly impact the environment, further guidance is given using indicative thresholds.

Annex: Indicative screening thresholds

Thresholds and Criteria for the identification of Schedule 2 development requiring Environmental Impact Assessment and indicative values for determining significant effects

The criteria and thresholds in column 2 represent the 'exclusion thresholds' in [Schedule 2](#) of the Regulations, below which Environmental Impact Assessment does not need to be considered (subject to the proposal not being in a [sensitive area](#)). The figures in column 3 are indicative only and are intended to help determine whether significant effects are likely. However, when considering the thresholds, it is important to also consider the location of the proposed development.

In general, the more environmentally sensitive the location, the lower the threshold will be at which significant effects are likely. It follows, therefore, that the thresholds below should only be used in conjunction with the general guidance on [determining whether Environmental Impact Assessment is required](#) and, in particular, the guidance on environmentally [sensitive areas](#). Column 4 illustrates the issues that are most likely to need to be considered for different development types. However, there will be other issues which will be specific to the nature of the environmental receptor. For example, ecological impacts are likely to be an issue for all development which is proposed to be located in a Site of Special Scientific Interest designated for its wildlife value.

Source:
<https://www.gov.uk/guidance/environmental-impact-assessment#the-indicative-thresholds>

Screening Schedule 2 developments

In April 2015, the thresholds for which the requirement for an EIA is excluded was updated for a number of development types.

After public consultation, the aim was to reduce the ‘red tape’, time, and expense, of the process.

Development types with changes included:

- Residential developments
- Urban developments
- Industrial developments

[Environment Bulletin: Recent changes to the Environmental Impact Assessment \(EIA\) Thresholds | Freeths - https://www.freeths.co.uk/insights-events/legal-articles/2015/environment-bulletin-recent-changes-to-the-environmental-impact-assessment-eia-thresholds/](https://www.freeths.co.uk/insights-events/legal-articles/2015/environment-bulletin-recent-changes-to-the-environmental-impact-assessment-eia-thresholds/)

For residential development, the previous threshold of 0.5ha is increased to 5ha or 150 units;

From 6 April 2015:

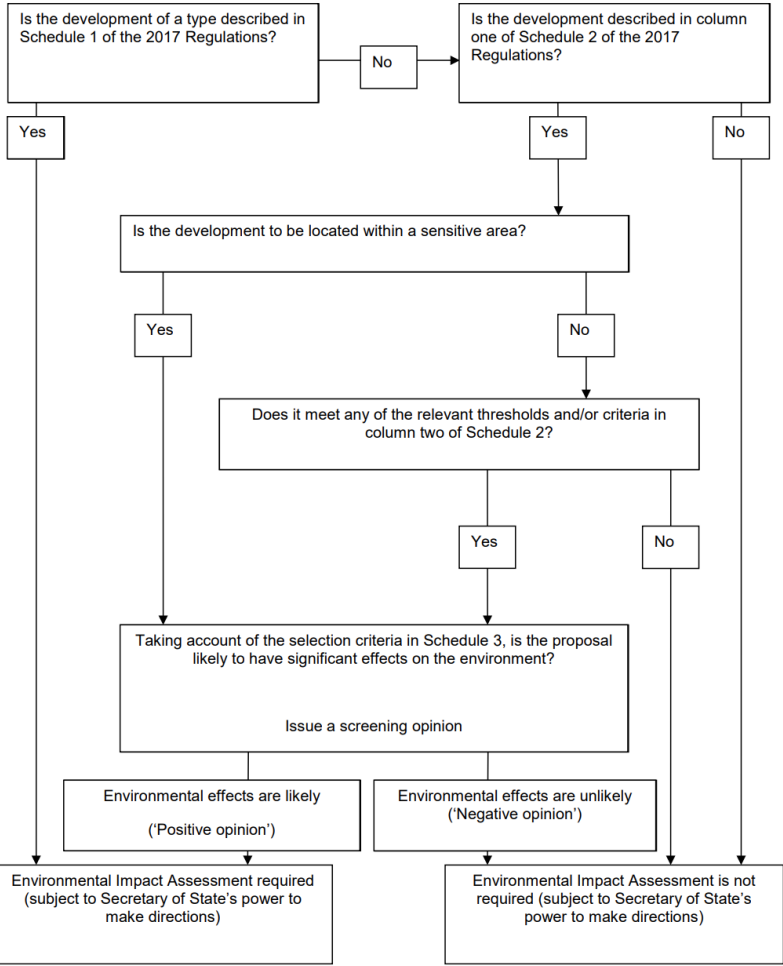
For other urban development projects, the previous threshold of 0.5ha is increased to 5ha; and

For industrial estate developments, the previous threshold of 0.5ha is increased to 5ha.

Column 1 Description of development	Column 2 Applicable thresholds and criteria
1 Agriculture and aquaculture	
(a) Projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes;	The area of the development exceeds 0.5 hectare.
(b) Water management projects for agriculture, including irrigation and land drainage projects;	The area of the works exceeds 1 hectare.
(c) Intensive livestock installations (unless included in Schedule 1);	The area of new floorspace exceeds 500 square metres.
(d) Intensive fish farming;	The installation resulting from the development is designed to produce more than 10 tonnes of dead weight fish per year.
(e) Reclamation of land from the sea.	All development.
2 Extractive industry	
(a) Quarries, open cast mining and peat extraction (unless included in Schedule 1); (b) Underground mining;	All development except the construction of buildings or other ancillary structures where the new floorspace does not exceed 1,000 square metres.
(c) Extraction of minerals by fluvial or marine dredging;	All development.
(d) Deep drillings, in particular— (i) geothermal drilling; (ii) drilling for the storage of nuclear waste material; (iii) drilling for water supplies; with the exception of drillings for investigating the stability of the soil.	(i) In relation to any type of drilling, the area of the works exceeds 1 hectare; or (ii) in relation to geothermal drilling and drilling for the storage of nuclear waste material, the drilling is within 100 metres of any controlled waters
(e) Surface industrial installations for the extraction of coal, petroleum, natural gas and ores, as well as bituminous shale.	The area of the development exceeds 0.5 hectare.
3 Energy industry	
(a) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1);	The area of the development exceeds 0.5 hectare.
(b) Industrial installations for carrying gas, steam and hot water;	The area of the works exceeds 1 hectare.
(c) Surface storage of natural gas; (d) Underground storage of combustible gases; (e) Surface storage of fossil fuels;	(i) The area of any new building, deposit or structure exceeds 500 square metres; or (ii) a new building, deposit or structure is to be sited within 100 metres of any controlled waters.
(f) Industrial briquetting of coal and lignite;	The area of new floorspace exceeds 1,000 square metres.
(g) Installations for the processing and storage of radioactive waste (unless included in Schedule 1);	(i) The area of new floorspace exceeds 1,000 square metres; or (ii) the installation resulting from the development will require the grant of an environmental permit under the Environmental Permitting (England and Wales) Regulations 2016;(2) in relation to a radioactive substances activity described in paragraphs 11(2)(b), (2)(c) or (4) of Part 2 of Schedule 23 to those Regulations, or the variation of such a permit.
(h) Installations for hydroelectric energy production;	The installation is designed to produce more than 0.5 megawatts.
(i) Installations for the harnessing of wind power for energy	(i) The development involves the installation of more than 2

Screening Schedule 2 developments

Activity: Using the EIA thresholds table (Schedule 2) to determine if the following developments would require an EIA:



Marina with an area of the enclosed water surface exceeds 500 square metres.



Motorway service areas that exceeds 0.75 hectares.



Plants for the tanning of hides and skins with an area of new floorspace exceeds 1,000 square metres



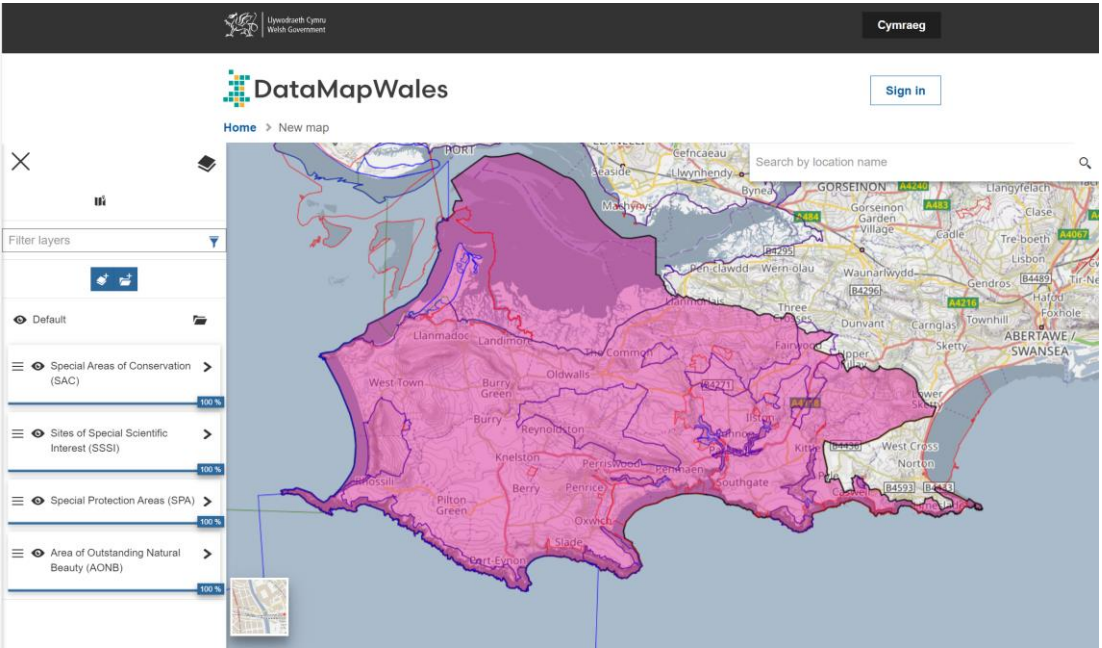
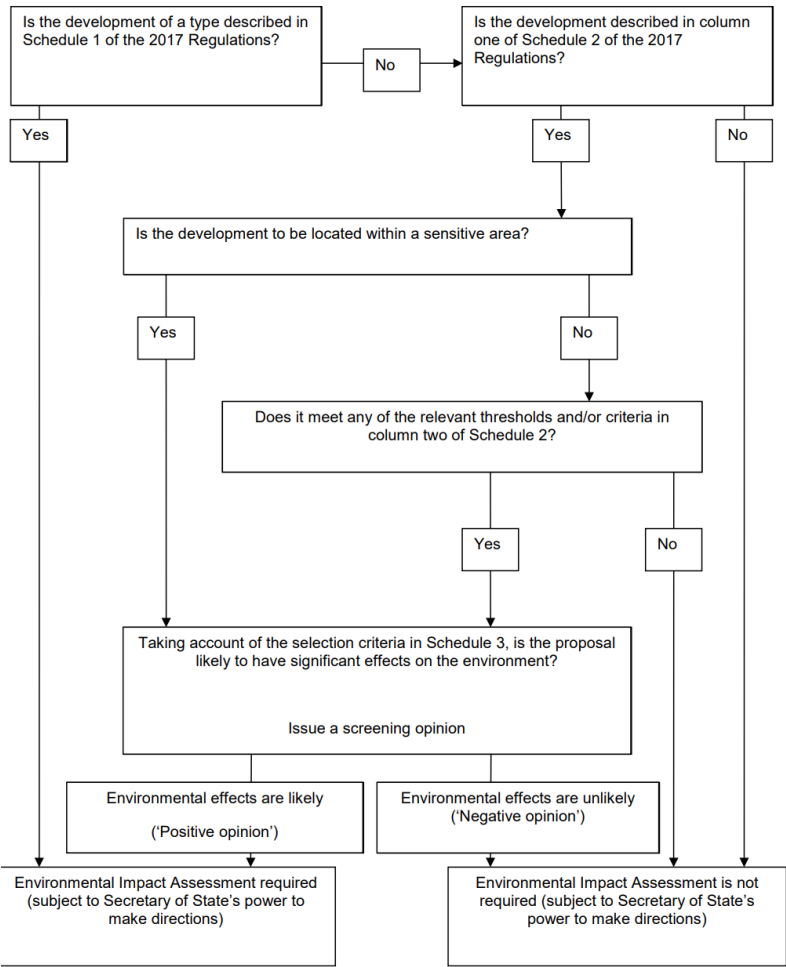
Installations for hydroelectric energy production designed to produce more than 0.2 megawatts



Screening Schedule 2 developments

When screening a Schedule 2 proposal for EIA, a planning authority will consider the following:

2. b) Is it in a 'sensitive area'? e.g. Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), National Park, Area of Outstanding Natural Beauty (AONB) etc.



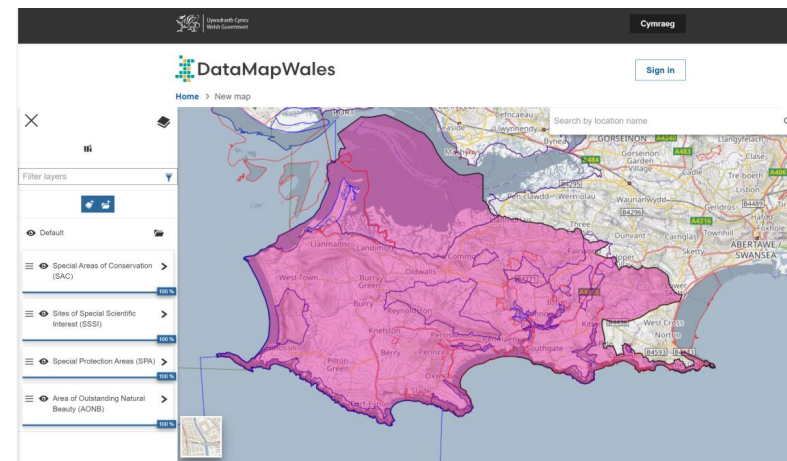
3. Is it likely to have significant effects on the environment by virtue of factors such as its nature, size or location?

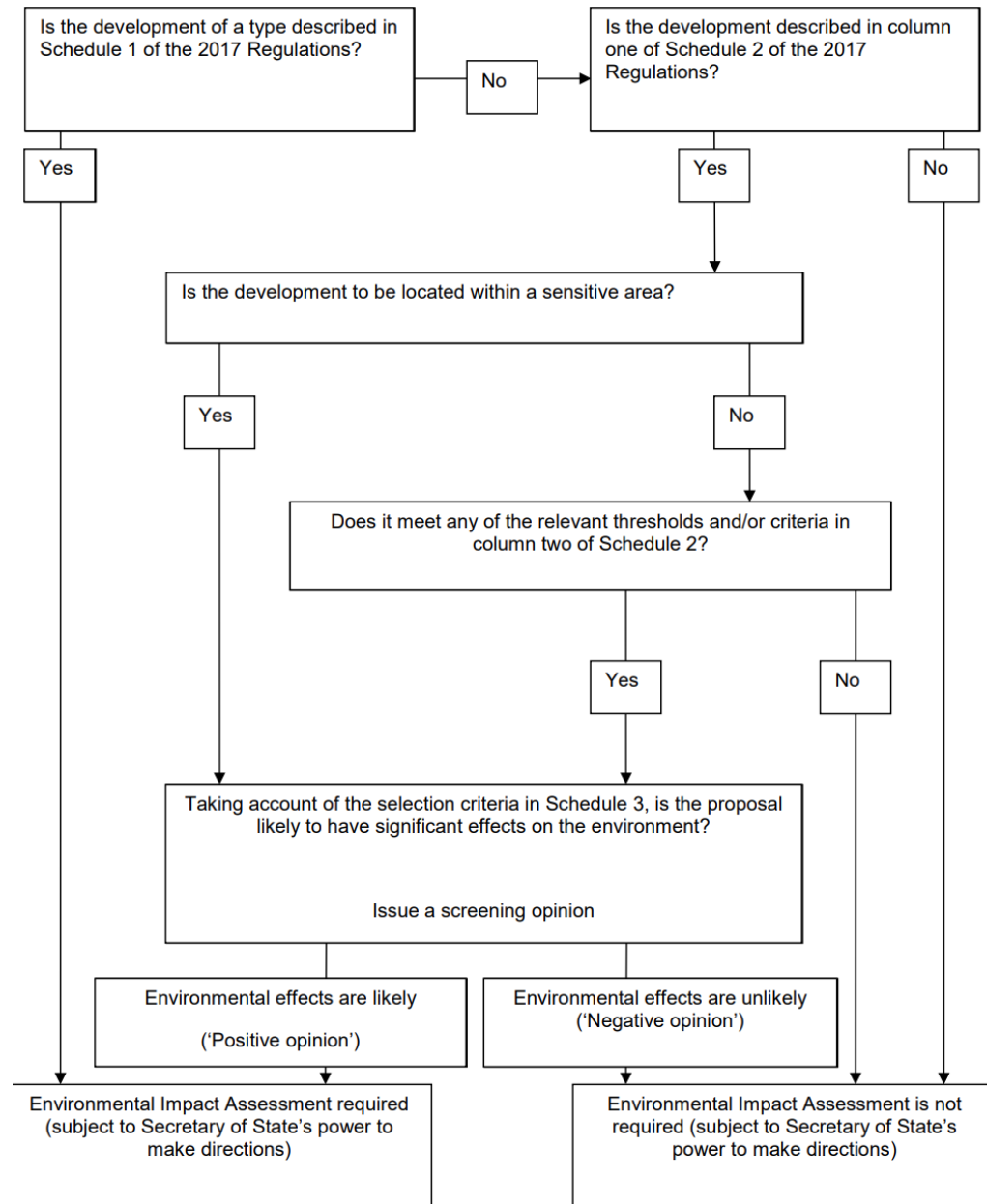
Activity

Visit the following website:

<https://datamap.gov.wales/maps/new#/>

Add SSSI, SAC, SPI, and AONB to your map.





Screening Schedule 3 developments

When a development is identified as surpassing the thresholds identified in Schedule 2, it is then screened against Schedule 3 criteria.

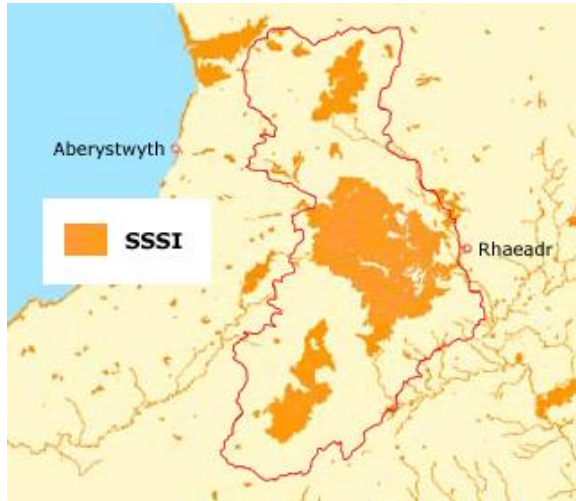
- Development Characteristics
- Location of Development
- Type of impact

- Visit: <https://www.legislation.gov.uk/uksi/2017/571/schedule/3/made>

Schedule 3: Development Characteristics

- Size and design of the development.
- Cumulation with other development.
- The use of natural resources, in particular land, soil, water and biodiversity.
- The production of waste.
- Pollution and nuisances.
- The risk of major accidents and/or disasters, including those caused by climate change.
- The risk to human health.





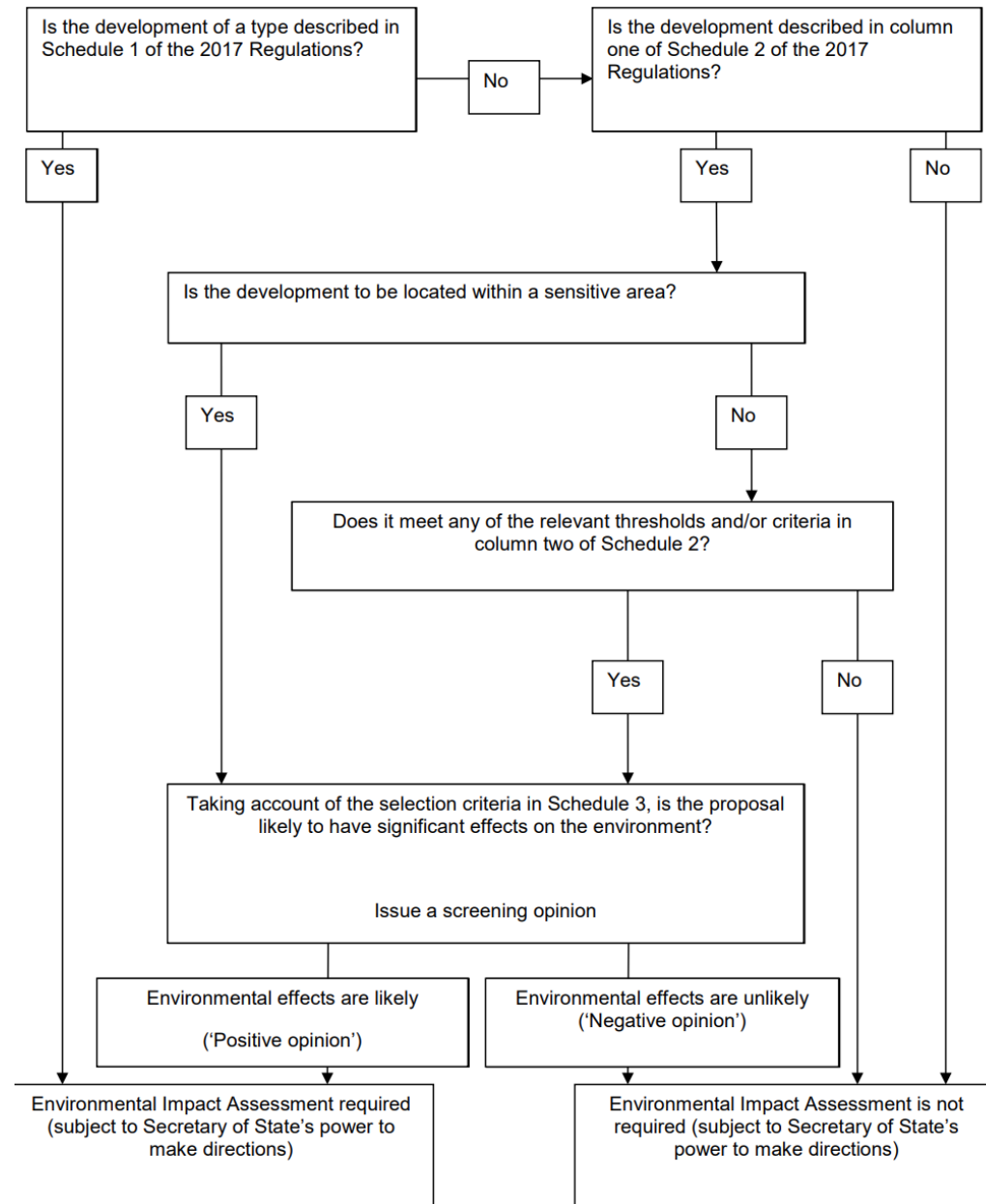
- Wetlands, riparian areas and river mouths.
- Coastal zone and marine environment.
- Mountain and forest areas.
- Nature reserves and parks.
- European sites and other areas classified or protected under national legislation
- Areas in which there has already been a failure to meet the environmental quality standards.
- Densely populated areas
- Landscapes and sites of historical, cultural or archaeological significance.



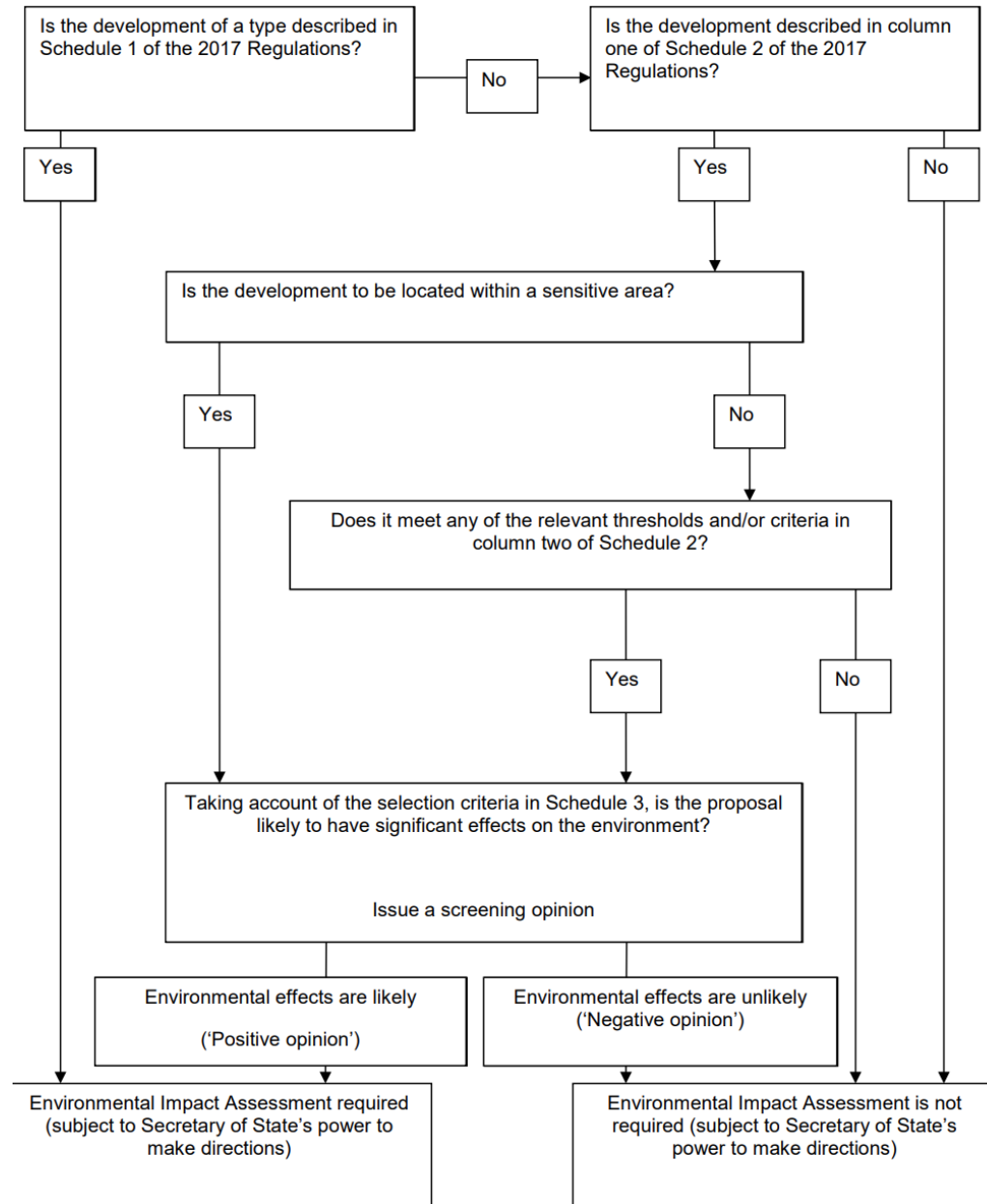
Schedule 3: Type of Impact

- The magnitude and spatial impact.
- The nature of the impact.
- The transboundary nature of the impact.
- The intensity and complexity of the impact.
- The probability of the impact.
- The expected onset, duration, frequency and reversibility of the impact.
- The cumulation of the impact.
- The possibility of reducing the impact.

Who decides if an EIA is required?

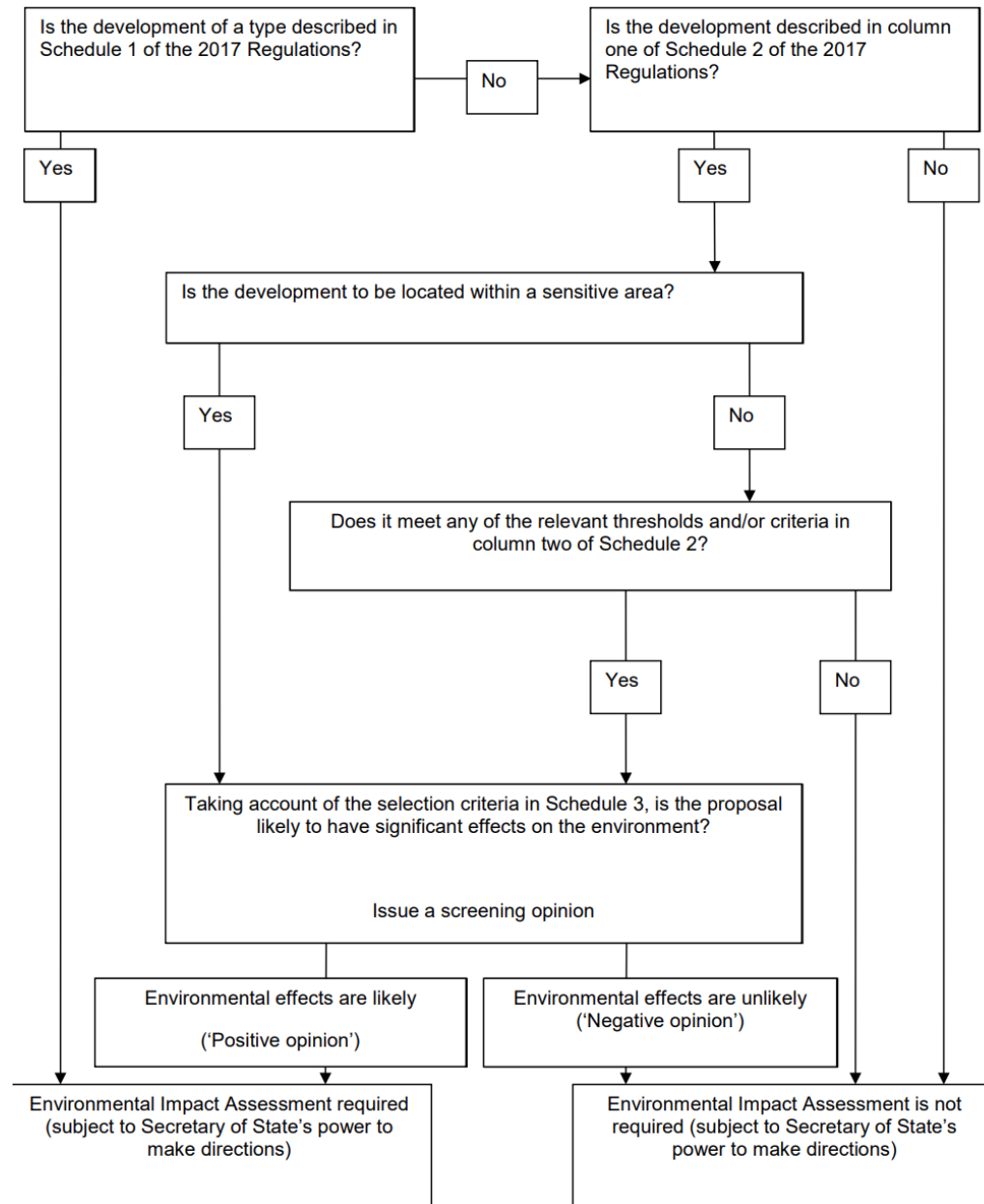


- A developer can submit an ES voluntarily with a planning application in recognition that their scheme falls under Schedule 1 or exceeds Schedule 2 thresholds and would have a significant effect.
- Normally, however, the local planning authority (LPA) decides if an EIA is required in consultation with the applicant in the first instance.
- The LPA will likely be asked by the applicant whether EIA is necessary for a Schedule 2 submission.
- The proposal will then either be 'screened in' or 'screened out' by the LPA.



Who decides if an EIA is required?

- Regulations require the LPA to provide, on request, a formal opinion as to whether EIA should be carried out. This is called a Screening Opinion.
- They have 21 days to provide this or not longer than 90 days as agreed with the applicant.
- The LPA must be satisfied that it has received sufficient information to give an opinion, bearing in mind that the failure to require an EIA for a project subsequently found to have significant environmental impacts could be subject to costly legal challenge.
- Where an application is submitted for a development falling within any of the Schedule 2 descriptions without an ES, the LPA may decide if an EIA is required and should refuse to consider the planning application until an ES is submitted.



Who decides if an EIA is required?

- The Secretary of State has powers to intervene in cases where the LPA has failed to give an opinion on whether an EIA is needed within the prescribed period, or where the applicant disagrees with the opinion given by the LPA.
- Their decision is known as a **Screening Direction**.
- They have up to 90 days to issue a screening direction under the EIA regulations.



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Planning – Screening/Scoping opinions and Environmental Impact Assessments (EIA)

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Public Register

To search our public register for a Screening/Scoping opinion or EIA:

1. Visit our [Planning search](#)
2. Type into the first search bar (Search by reference, proposal details or address) and search for ‘Screening opinion’, ‘Scoping opinion’ or ‘EIA’ as required.
3. If you wish to search for applications relating to a specific address or date, optional search fields have been provided to input this information.
4. All applications encompassing your search will appear in list form.

Screening Considerations

- Screening Decisions have to be made publicly available.
- Not following the legislation can lead to court action.
- Some applicants try to negate EIA’s by ‘salami-slicing’ the overall proposed plan into smaller chunks which are more likely to get approval (Enríquez-de-Salamanca, Á., 2016)

Submitting Screening application:

Rheoliadau Asesu'r Effeithiau Amgylcheddol (AEA) (Amaethyddiaeth) (Cymru) 2017 – Ffurflen Gais Penderfyniad Sgrinio

The Environmental Impact Assessment (EIA) (Agriculture) (Wales) Regulations 2017 – Screening Decision Application Form



Adran 1 – Manylion y busnes / Section 1 – Business details

1. Nodwch eich 'Cyfeirnod Cwsmer' (CRN) bob amser / Please quote your Customer Reference Number (CRN) at all times

A

2. Enw Masnachu a Chyfeiriad Gohebu / Trading Title and Correspondence Address

3. Enw(au) Cyswllt / Contact Name(s)

4. Rhif(au) Ffôn / Telephone Number(s)

Symudol / Mobile

5. E-bost / E-mail

Cyn llenwi'r datganiad hwn, darllenwch Nodiadau Cyfarwyddyd AEA. **Llenwch y ffurflen gais hon gan ddefnyddio priflythrennau, inc du a chofiwch ysgrifennu y tu mewn i'r blychau yn unig. Anfonwch y ffurflen hon i'ch Swyddfa Ranbarthol leol (gweler Adran 6) a hefyd fap.**

Before completing this declaration, read the EIA General Guidance. **Please complete this application using capital letters, black ink and write inside the boxed areas only. Return completed Application to your local Divisional Office (see Section 6) with a map.**

Adran 2 – Manylion cynlluniau eraill / Section 2 – Other scheme details

[Screening decision application from \(gov.wales\)](https://gov.wales)

10/15/2024

ACBA 7004 77



Activity

Visit a local council planning page and see if you can find screening requests / opinions / decisions

Screening examples: Dean Quarry

A WORLD FIRST: £1.3bn POWER STATION

The Swansea tidal lagoon project will cost £1.3 billion and generate 320 megawatts - enough to power 155,000 homes

A visitors' centre inspired by an oyster is planned for the bay

HOW IT WORKS

1 As the tide comes in, the sea water flows through the turbines into the lagoon, making them spin and generating electricity

2 Power is generated again when the tide goes out, and the water leaves the lagoon through the turbines

The Severn Estuary has the second highest tidal range in the world. In Swansea Bay it is between 23ft and 30ft

Daily volume of water through the turbines is equivalent to 100,000 Olympic swimming pools

The turbines are 23ft in diameter

The breakwater, made from concrete and stone, will be six miles long, and enclose 4.5sq miles

Bank of 16 turbines

SWANSEA

Port Talbot

Swansea Bay

Mumbles pier

TIDAL LAGOON

TURBINE

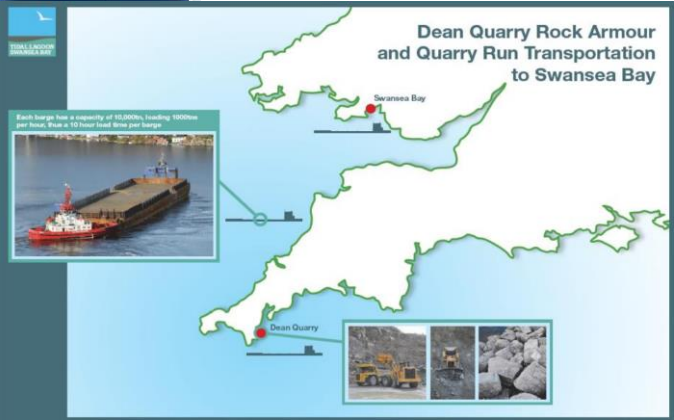
Swansea Bay

Breakwater

Lagoon

TURBINE

Swansea Bay Tidal Lagoon plan

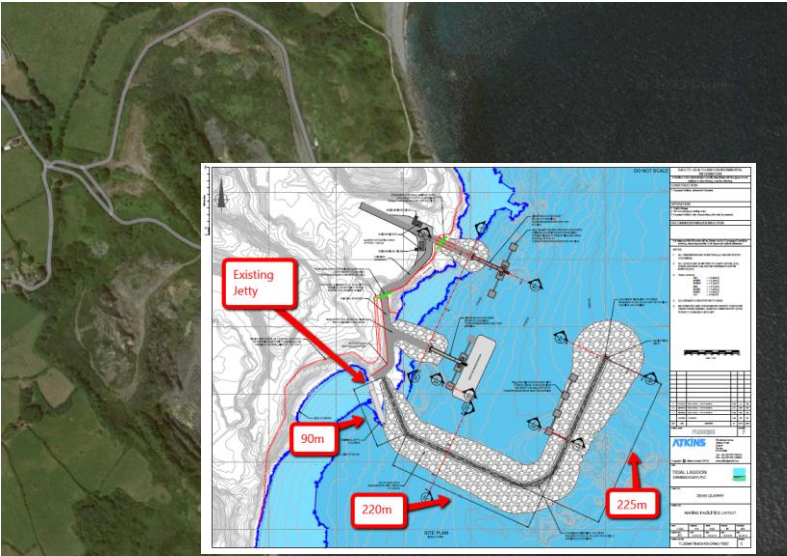


Proposed plan to use Dean Quarry to supply material

- Screening Decisions have to be made publicly available.
- Not following the legislation can lead to court action.

Dean Quarry, Cornwall:

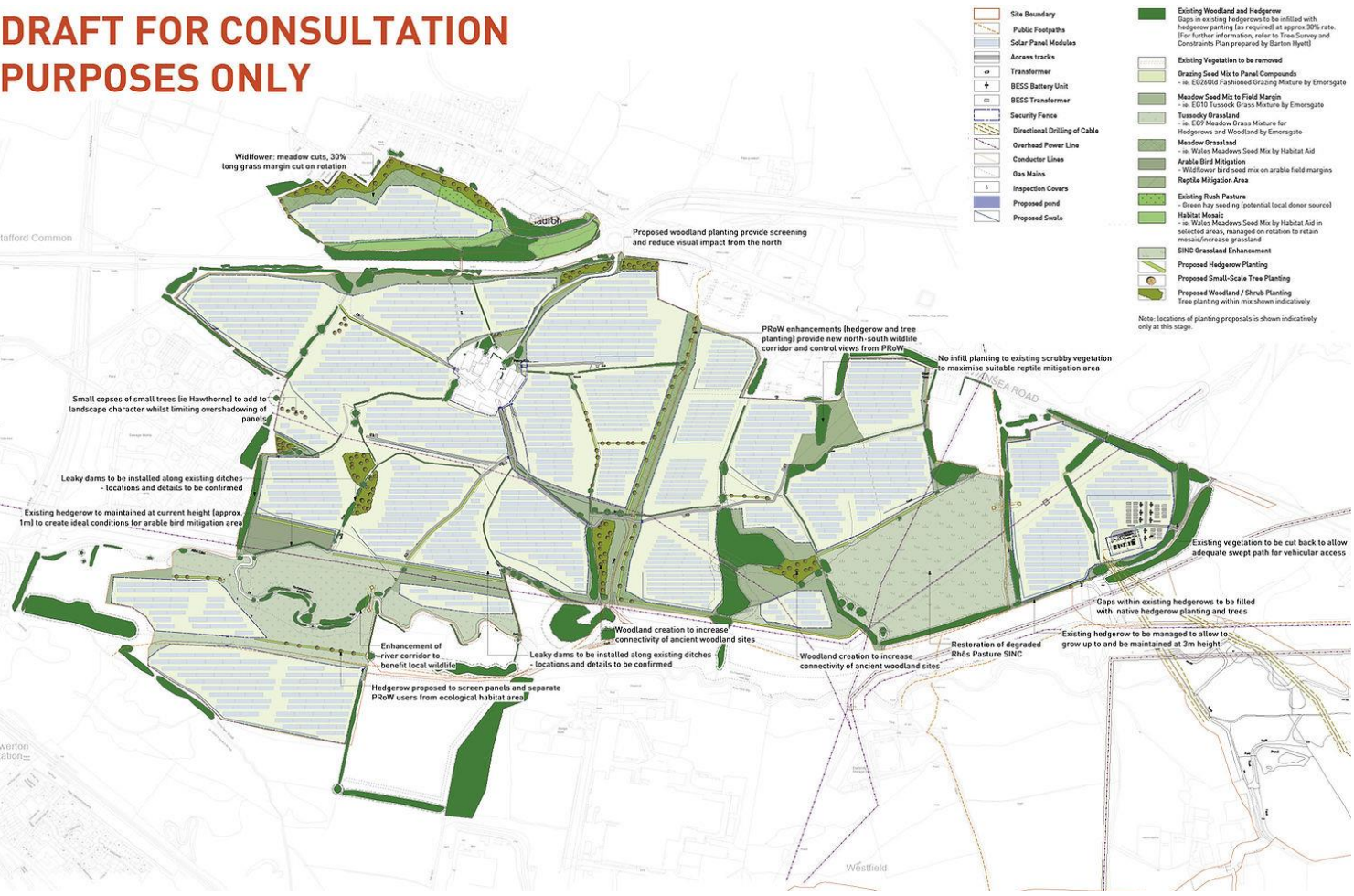
- Initial proposal – minor development around old quarry
 - Deemed ‘salami-slicing’
- Council screening decision – Negative opinion, EIA not required
- Public appeal: Cornwall Against Dean Superquarry
- Secretary of State: Positive opinion, EIA required
- **High court action.**



Proposed plan at Dean Quarry

Screening examples: Parc Solar Caenewydd

DRAFT FOR CONSULTATION
PURPOSES ONLY



Proposed plan for Parc Solar Caenewydd

- Parc Solar Caenewydd, Swansea:
- Large solar farm proposed for north-west Swansea
 - 90 hectares of land to power 11,500 homes
 - Considered a project of ‘National significance’
 - Screening Opinion requested from Welsh Government:
 - Detailed Screening report provided outlining criteria for Schedules 1 to 3
 - Conclusion: No EIA required
- Visit:
<https://www.parc solar caenewydd.co.uk/>

Therefore, in exercise of the powers conferred by the Regulations and the authority referred to above, the Welsh Ministers hereby direct that the development subject of this application **is not EIA development** within the meaning of the Regulations.

Screening examples: Gowerton Housing development



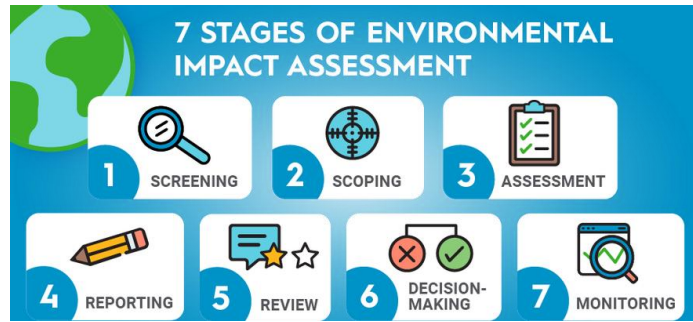
Gowerton, Swansea:

- Proposal for a residential development of circa 230 dwellings
- Development within a woodland that was previously a copper works.
- Screening Opinion submitted and successful

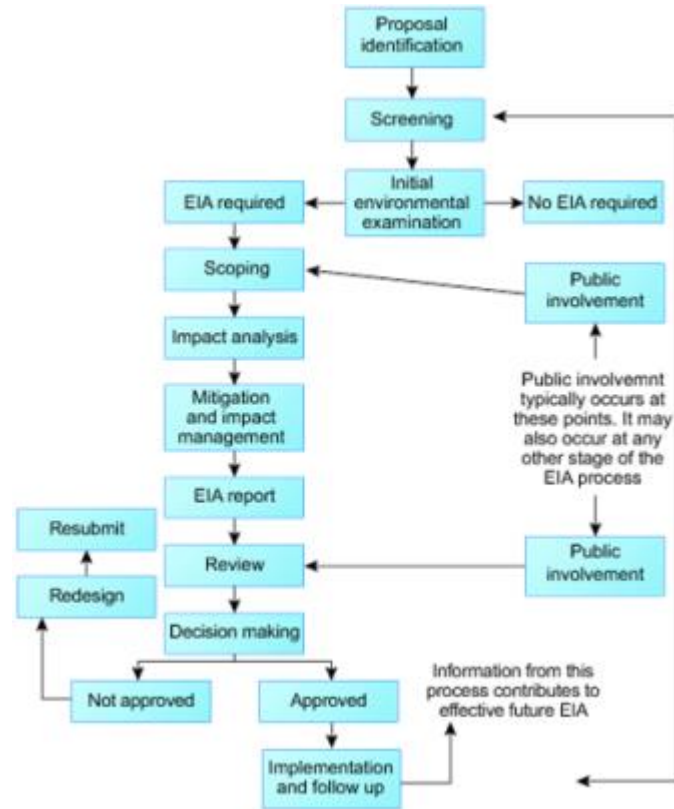
Activity:

- Visit Moodle to read the Screening Request by Persimmon
- Discuss the quality of the screening request
- Discuss whether this proposed development was right to be accepted

EIA Key Stages: Scoping



After Screening comes Scoping.



Stage

What's involved

1. Screening

Deciding if an EIA is required

2. Scoping

Deciding what needs to be covered in the assessment and reported in the ES

3. Assessment and Report

The ES has to include the likely significant environmental effects of the development

4. Review of Application

The ES and development application must be publicised so interested parties and the public have the opportunity to give their views on it.

5. Decision

The ES and any comments made on it must be taken into account by the competent authority before they decide whether to give consent.

6. Implementation and monitoring

The developer must commence any monitoring required by the competent authority.

Source: United Nations University (2007)
https://wedocs.unep.org/bitstream/handle/20.500.11822/26503/EIA_Training_Resource_Manual.pdf



Take a break

10mins

Scoping

- Scoping is the stage that sets out what needs to be assessed in the EIA to help define how to approach the assessment and what information may be needed to identify the likely significant effects from the development.
- You can request a scoping opinion from the EIA decision-maker. A scoping opinion sets out what the decision-maker expects to be included and excluded from the EIA. Decision-makers will consult with consultation bodies, before issuing their scoping opinion.
- **To request a scoping opinion, you need to provide the decision-maker with a scoping report.**

What to include in a Scoping report

A scoping report must include these legal requirements:

- A description of the nature and purpose of the project and the possible effects on the environment.
- Plans, charts or maps sufficient to identify the location of the activities to be carried out.

The structure of a scoping report should be the same as the intended final Environmental Statement.

- the purpose is in effect to clarify what aspects / elements will need to be considered in the Environmental Impact Assessment, and therefore the topics / headings will be the same.

What to include in a Scoping report

An Environmental Impact Assessment (EIA) needs to include:

- Description of project, location and purpose, including construction, operation, maintenance, and decommissioning. Include ancillary works, such as any cable corridors and temporary structures

What to include in a Scoping report

- An Environmental Impact Assessment (EIA) needs to include:
 - Description of reasonable alternatives
 - Current state of the environment (baseline)
 - Description of likely significant effects on these receptor topics:
 - Population and human health
 - Biodiversity, including protected species and habitats
 - Land, soil, water, air and climate
 - Material assets, cultural heritage and landscape
 - In-combination effects



What to include in a Scoping report

- An Environmental Impact Assessment (EIA) needs to include:
 - Description of direct, indirect, secondary, cumulative, transboundary, short, medium and long-term, permanent and temporary, positive and negative effects.
 - Description of evidence and methods to be used, including any gaps or uncertainties
 - Description of measures to avoid, reduce and mitigate adverse effects

What to include in a Scoping report

An Environmental Impact Assessment (EIA) needs to include:

- Monitoring measures
- Risk of major accidents or disasters, such as extreme weather events.

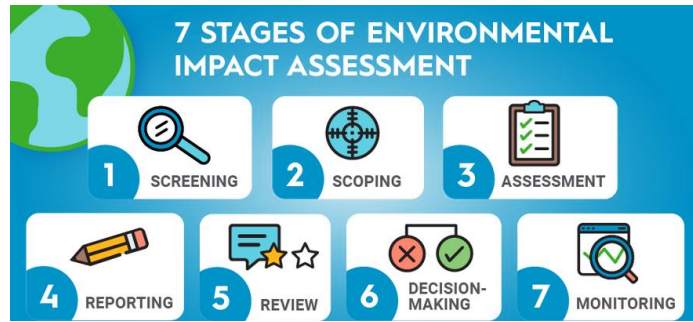
EC guidance – Scoping Checklist:

[Scoping Checklist](https://ec.europa.eu/environment/archives/eia/eia-guidelines/scoping_checklist.pdf)

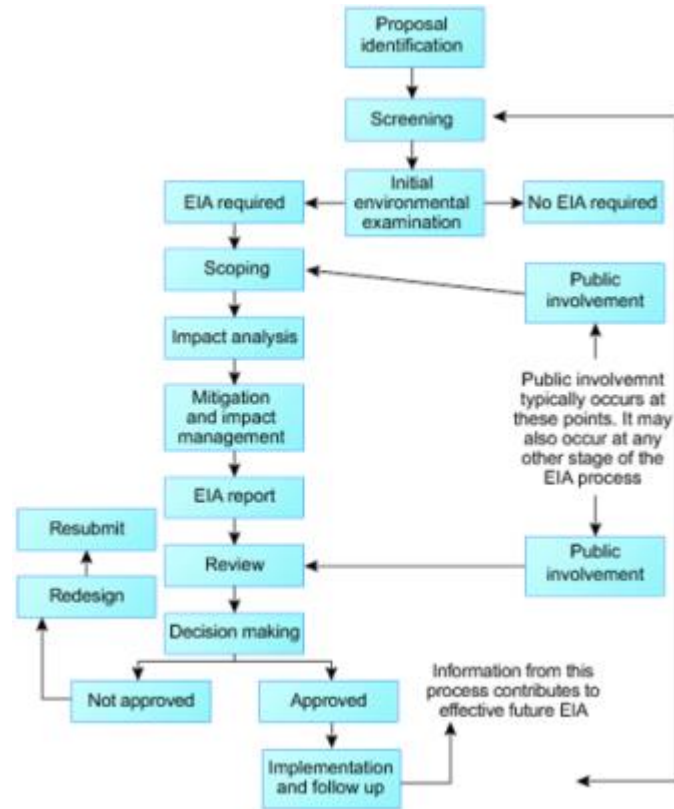
https://ec.europa.eu/environment/archives/eia/eia-guidelines/scoping_checklist.pdf

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
1. Will construction, operation or decommissioning of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in waterbodies, etc)?				
1.1	Permanent or temporary change in land use, landcover or topography including increases in intensity of land use?			
1.2	Clearance of existing land, vegetation and buildings?			
1.3	Creation of new land uses?			
1.4	Pre-construction investigations eg boreholes, soil testing?			
1.5	Construction works?			
1.6	Demolition works?			
1.7	Temporary sites used for construction works or housing of construction workers?			
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations?			
1.9	Underground works including mining or tunnelling?			
1.10	Reclamation works?			
1.11	Dredging?			
1.12	Coastal structures eg seawalls, piers?			
1.13	Offshore structures?			
1.14	Production and manufacturing processes?			
1.15	Facilities for storage of goods or materials?			
1.16	Facilities for treatment or disposal of solid wastes or liquid effluents?			
1.17	Facilities for long term housing of operational workers?			

First part of the European Commission guidance Scoping Checklist



Having determined the need for an EIA, a full assessment must be conducted, and the Environmental Statement (ES), or Environmental Impact Statement (EIS), produced.



Stage

What's involved

1. Screening

Deciding if an EIA is required

2. Scoping

Deciding what needs to be covered in the assessment and reported in the ES

3. Assessment and Report

The ES has to include the likely significant environmental effects of the development

4. Review of Application

The ES and development application must be publicised so interested parties and the public have the opportunity to give their views on it.

5. Decision

The ES and any comments made on it must be taken into account by the competent authority before they decide whether to give consent.

6. Implementation and monitoring

The developer must commence any monitoring required by the competent authority.

Environmental Statement

- The applicant is responsible for the preparation of the Environmental Statement.
- In order to ensure completeness and quality, the applicant must ensure that it is prepared by competent **experts**.

It must be accompanied by a statement from the developer outlining the relevant expertise, or qualifications of such experts.



What to include in an Environmental Statement

The Town and Country Planning (Environmental Impact Assessment) Regulations 2017

◀ Previous: Schedule

Next: Explanatory Note ▶

SCHEDULE 4	Regulation 18(3)
INFORMATION FOR INCLUSION IN ENVIRONMENTAL STATEMENTS	
1. A description of the development, including in particular: a description of the location of the development; a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases; a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases. 2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects. 3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge. 4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape. 5. A description of the likely significant effects of the development on the environment resulting from, inter alia: the construction and existence of the development, including, where relevant, demolition works; the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources; the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste; the risks to human health, cultural heritage or the environment (for example due to accidents or disasters); the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources; the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change; the technologies and the substances used. The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(1) and Directive 2009/147/EC(2). 6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved. 7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases. 8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU(3) of the European Parliament and of the Council or Council Directive 2009/71/Euratom(4) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies. 9. A non-technical summary of the information provided under paragraphs 1 to 8. 10. A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	

Schedule 4 provides guidance on what to include in the Environmental Statement

While the contents are stipulated, the specific methods and techniques are not, and therefore are left to the developer to determine (Glasson et al., 2012).

The reasoning is that each proposed development will be unique in setting and availability of information to the area.

Description

What to include in an Environmental Statement

- The Environmental Statement must contain the following information:
 - A description of the development, including in particular:
 - A description of the location of the development;
 - A description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;
 - A description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;
 - An estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.

Reasonable Alternatives

- The Environmental Statement must contain the following information:
 - A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

What to include in an Environmental Statement

Baseline

What to include in an Environmental Statement

- The Environmental Statement must contain the following information:
- A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

What to include in an Environmental Statement

- A description of the factors likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.

Factors affected



Significant effects

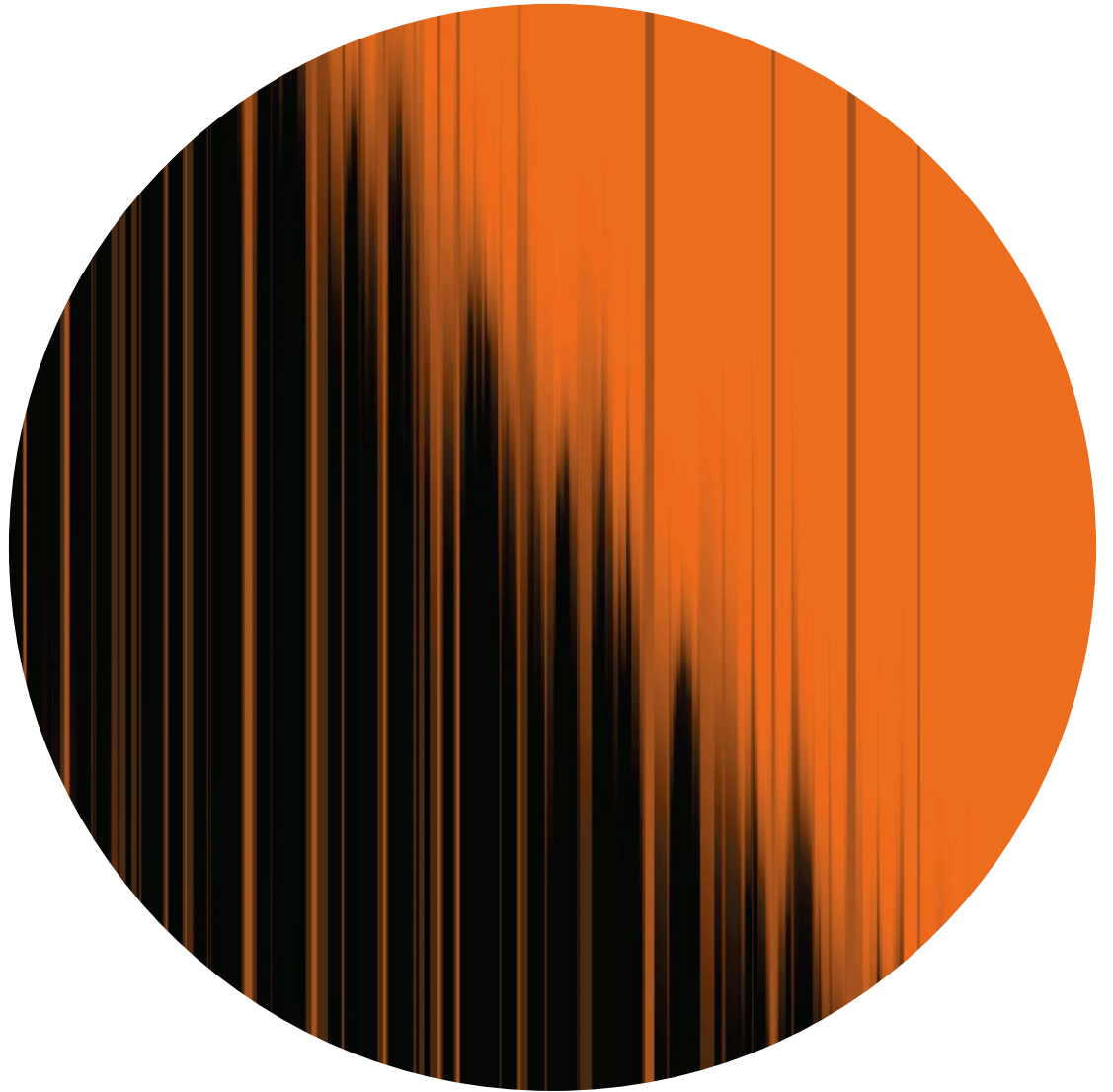


What to include in an Environmental Statement

- The Environmental Statement must contain the following information:
 - A description of the likely significant effects of the development on the environment resulting from, amongst other things:
 - The construction and existence of the development, including, where relevant, demolition works;
 - The use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;
 - The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;
 - the risks to human health, cultural heritage or the environment (for example due to accidents or disasters)

What to include in an Environmental Statement

- The Environmental Statement must contain the following information:
 - A description of the likely significant effects of the development on the environment resulting from, amongst other things:
 - The cumulation of effects with other existing and/or approved projects, accounting for any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;
 - The impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change
 - The technologies and the substances used.

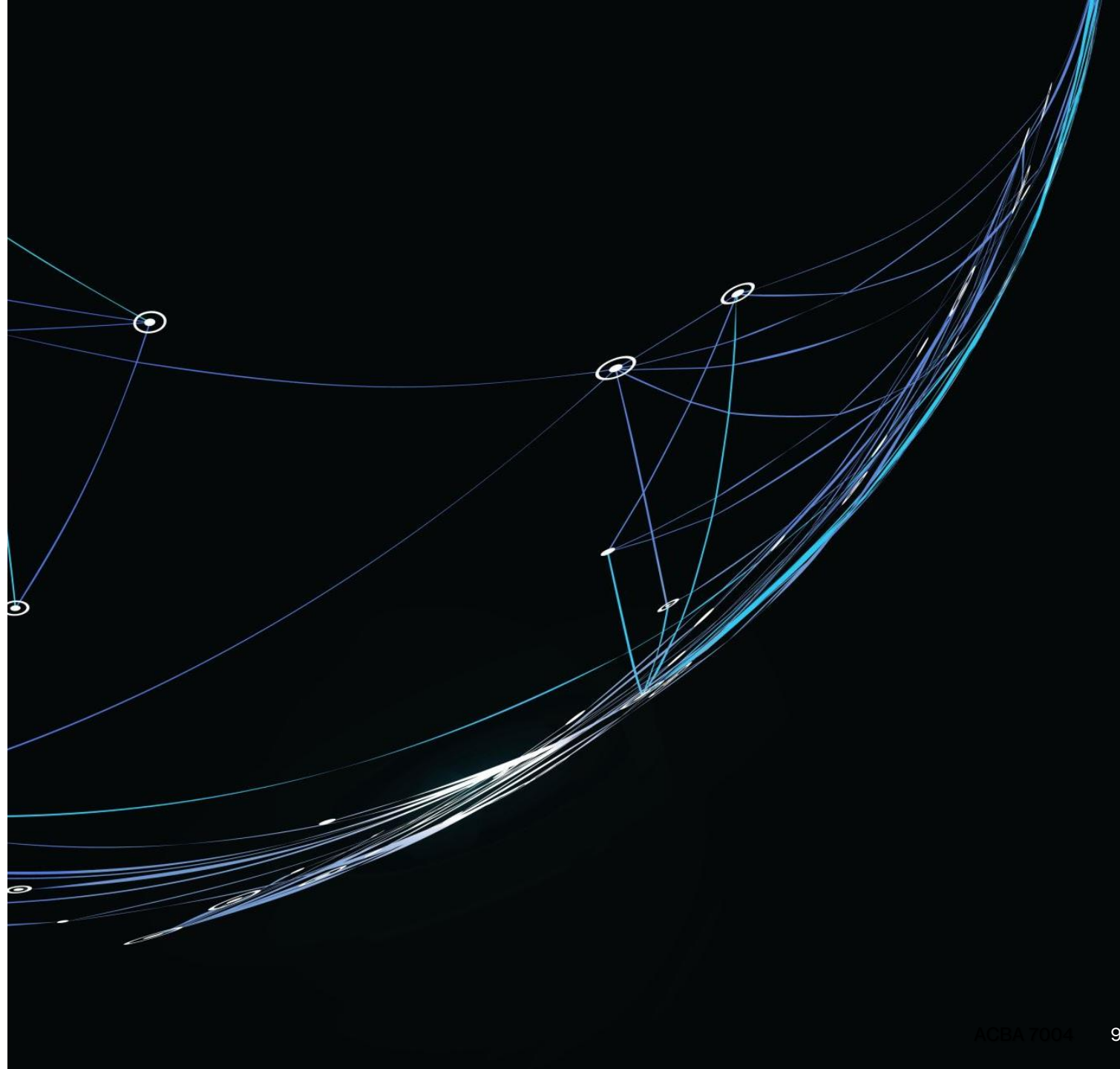


Effects on environment

What to include in an Environmental Statement

- The description of the likely significant effects on the factors specified should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development.

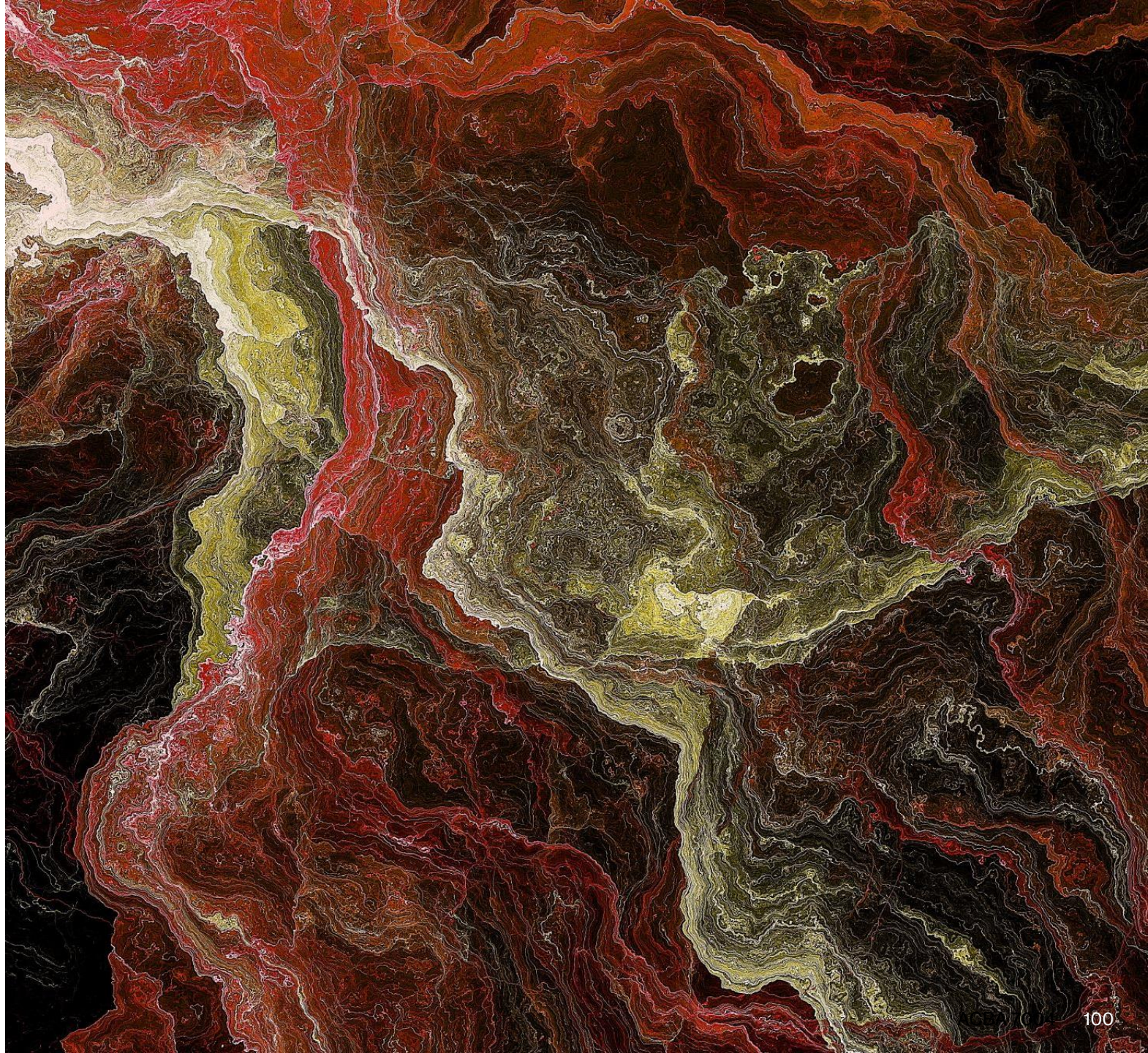
**Indirect /
transboundary**



What to include in an Environmental Statement

- The Environmental Statement must contain the following information:
 - A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.

Evidence?





What to include in an Environmental Statement

- A description of the **expected significant adverse effects** of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned.
- Where appropriate, this description **should include measures envisaged to prevent or mitigate the significant adverse effects** of such events on the environment and details of the preparedness for and proposed response to such emergencies.

What to include in an Environmental Statement

- The Environmental Statement must contain the following information:
 - A non-technical summary of the information
 - A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.



Activity

Visit the following website: [Blue Gem - Erebus - Virtual Exhibition \(3dwtech.co.uk\)](https://www.3dwtech.co.uk/blue-gem-erebus-virtual-exhibition)

Visit the virtual Erebus exhibition.



Activity

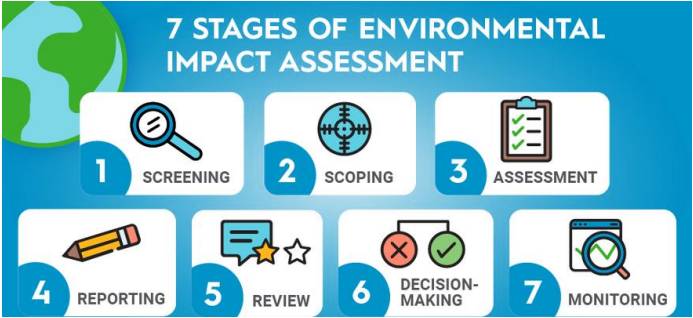
- Is the virtual consultation useful?**
- What key information is provided?**
- How have they made this content accessible?**
- How did they assess impacts?**
- What key legislation is relevant here?**



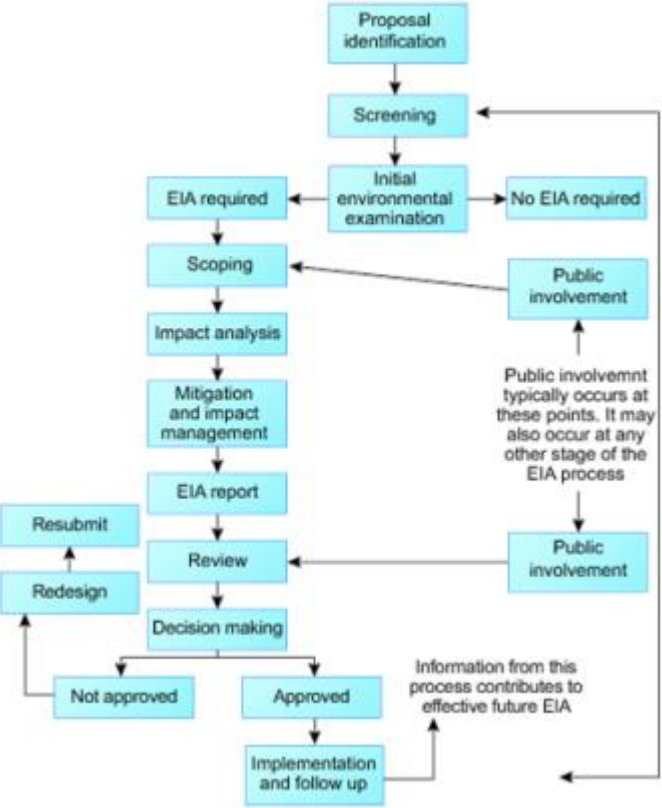
Take a break

10mins

EIA Key Stages: Review of Application



Having determined the need for an EIA, a full assessment must be conducted, and the Environmental Statement (ES), or Environmental Impact Statement (EIS), produced.



Stage	What's involved
1. Screening	Deciding if an EIA is required
2. Scoping	Deciding what needs to be covered in the assessment and reported in the ES
3. Assessment and Report	The ES has to include the likely significant environmental effects of the development
4. Review of Application	The ES and development application must be publicised so interested parties and the public have the opportunity to give their views on it.
5. Decision	The ES and any comments made on it must be taken into account by the competent authority before they decide whether to give consent.
6. Implementation and monitoring	The developer must commence any monitoring required by the competent authority.

Source: United Nations University (2007)
https://wedocs.unep.org/bitstream/handle/20.500.11822/26503/EIA_Training_Resource_Manual.pdf

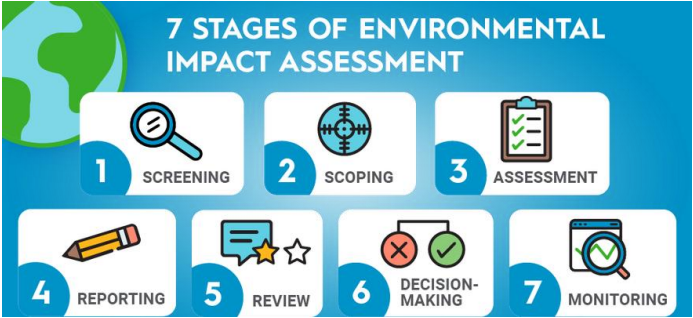
Application submission

- When an applicant intends to submit a planning application with an Environmental Statement, they should send the local planning authority (LPA) all the documents which must normally accompany a planning application as well as the Environmental Statement.
- **In addition, the applicant must also submit:**
 - One further copy of the Environmental Statement for onward transmission by the local planning authority to the Secretary of State;
 - A note of the name of everybody to whom the applicant has already sent, or intends to send, a copy of the Environmental Statement and the date on which the Environmental Statement was so served, where relevant;
 - Sufficient further copies of the Environmental Statement as are needed to allow the local planning authority to send one to each of the consultation bodies who have not received a copy directly from the applicant.

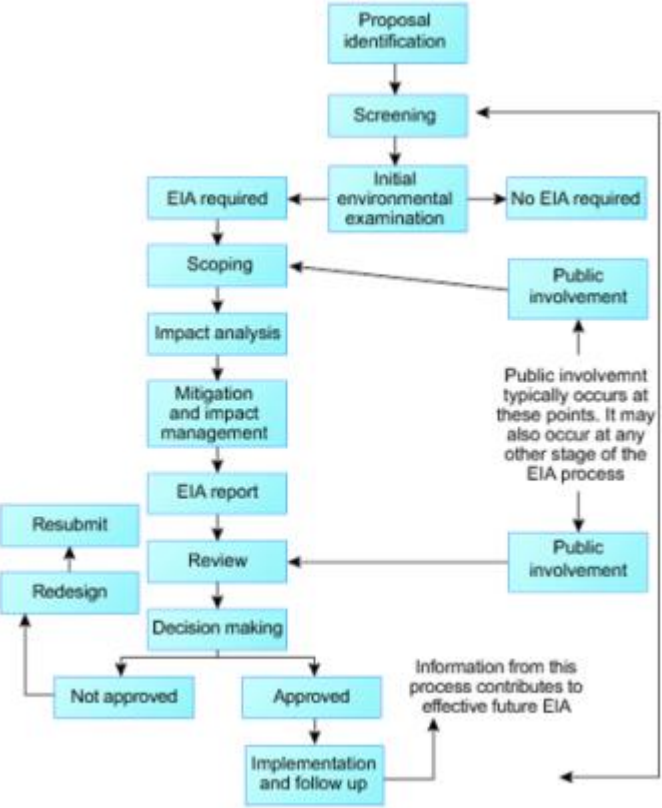
Publicity

- The planning application and the Environmental Statement should be publicised according to the Town and Country Planning legislation.
- The legislation contains the appropriate form for the notices to be published in the local press and posted on site, which must:
 - State that a copy of the Environmental Statement is included in the documents which will be open to inspection by the public and give the address where the documents can be inspected free of charge;
 - Give an address in the locality where copies of the Environmental Statement may be obtained;
 - State that a copy may be obtained at that address while stocks last and the amount of any charge to be made for supplying a copy;
 - Give details of a website maintained by or on behalf of the authority on which the environmental statement and the other documents have been made available;
 - State the latest date by which any written representations about the application should be made to the local planning authority (being a date not less than 30 days later than the date on which the notice is published).

EIA Key Stages: Review of Application



Having determined the need for an EIA, a full assessment must be conducted, and the Environmental Statement (ES), or Environmental Impact Statement (EIS), produced.



Stage	What's involved
1. Screening	Deciding if an EIA is required
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Source: United Nations University (2007)
https://wedocs.unep.org/bitstream/handle/20.500.11822/26503/EIA_Training_Resource_Manual.pdf



Activity

EIA review is a key part of the EIA process. Using the handout and presentation provided (Guidelines for reviewing technical reports), write a short plan on how you would critique an EIA document.

Bullet points on key considerations?

EIA Core Values

A number of core values and guiding principles for the practice of EIA have been identified:

Sustainability – EIA process result in environmental safeguards as it is anticipatory and preventive rather than curative (aids precautionary and preventive principle).

Integrity – the process will conform to agreed standards and be performed by multidisciplinary teams.

Utility – the process provides balanced, credible information for decision- making.

Key Guiding Principles for EIA

Continuity - as an integral part of planning, designing and implementation cycle of and development initiative, EIA should run continuously and throughout project cycle.

Participatory - EIA provides a framework for stakeholders and all interested parties to participate in decision-making.

Transparency – EIA facilitates dialogue, predictions and responses in a forum where proponents, decision-makers, experts and the public interact in an open and accessible way in considering the potential impacts of a project on local community, natural resources and environmental quality. All assessment decisions and their basis, should be open and accessible.

Credibility – assessments are undertaken with professionalism and objectivity, using multidisciplinary skills.

Certainty – the process and timing of assessment must be agreed in advance and followed by all participants.

Cost-effectiveness – the assessment process and its outcomes will ensure environmental protection at the least cost to society. It ensures fair and equitable distribution of project costs and benefit. As a minimum, local people in a project area must not be worse-off than they were before a project was implemented.

Flexibility – the assessment should be able to adapt to deal efficiently and effectively with any proposal or decision-making situation.

Practicality – the information and outputs are readily usable for planning, designing and in decision-making.

Accountability – decision-makers are responsible to all parties for decision and actions under the assessment process.

EIA Good practice

Guiding principles of EIA good practice	
Principles	Practical application
Purposive	EIA should meet its aims of informing decision making and ensuring an appropriate level of environmental protection and human health.
Focused	EIA should concentrate on significant environmental effects, taking into account the issues that matter.
Adaptive	EIA should be adjusted to the realities, issues and circumstances of the proposals under review.
Participative	EIA should provide appropriate opportunities to inform and involve the interested and affected publics, and their inputs and concerns should be addressed explicitly.
Transparent	EIA should be a clear, easily understood and open process, with early notification procedure, access to documentation, and a public record of decisions taken and reasons for them.
Rigorous	EIA should apply the 'best practicable' methodologies to address the impacts and issues being investigated.
Practical	EIA should identify measures for impact mitigation that work and can be implemented.
Credible	EIA should be carried out with professionalism, rigor, fairness, objectivity, impartiality and balance.
Efficient	EIA should impose the minimum cost burden on proponents consistent with meeting process requirements and objectives.
Source: Sadler, 1996; IAIA and IEMA, 1999.	

Reminder: Costs and Benefits of Using EIA

- **Benefits**
- **There are both direct and indirect benefits of EIA.**
- More environmentally sustainable design or improvements in the design.
- Better compliance with environmental standards.
- Savings in capital and operating cost.
- Reduces time and cost of approvals of development application.
- Resolves conflict, solves problems and thus increase project acceptability.
- Improves institutional co-ordination and inter-agency co-operation.
- Improves accountability and transparency in planning and decision-making
- For business and governments - EIA - important planning and management tool.
- Environmental assessments good > good management > good business

Limitations of EIA



- EIA is also a way of ensuring that environmental factors are considered in decision-making process along with the traditional economic and technical factors.
- Importantly EIA requires the scientific (technical) and value issues to be dealt with in a single assessment process.
- This helps in the proper consideration of all advantages and disadvantages of a proposal.
- Environmental considerations may, therefore, be set aside in favour of what are felt to be more important considerations.
- Alternatively, predicted adverse effects on the environment might lead to strict conditions being imposed to avoid these effects or remedy any adverse effects, or perhaps lead to the complete abandonment of a proposal.

Limitations of EIA

- However, it is most important to recognise that EIA cannot be regarded as a means of introducing an environmental “veto” power into administrative decision-making processes.
- **Decisions that are unsatisfactory from an environmental point of view can still be made, but with full knowledge of the environmental consequences.**
- The final decision about a proposal depends upon the likely severity of the adverse effects, balanced against other expected benefits.



Limitations of EIA



- In other words, EIA is an administrative process that identifies the potential environmental effects of undertaking a proposal, and presents these environmental effects alongside the other advantages and disadvantages of the proposal to the decision-makers.
- In the vast majority of EIA procedures this means that the outcome of the EIA process provides advice to the decision-makers – it does not provide a final decision.
- So, by itself, the EIA procedures cannot be expected to stop a proposal – although this is an outcome that some members of the general community and environment groups may expect.

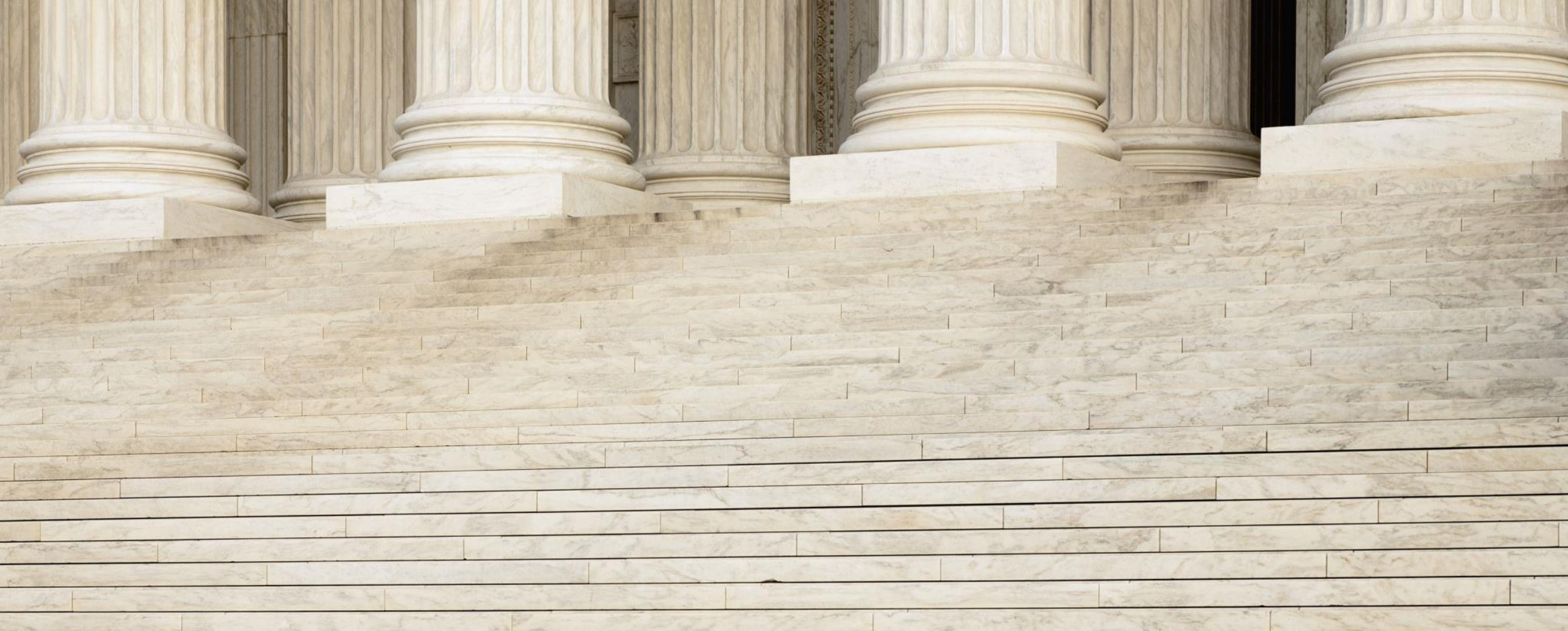
Principles of EIA administration and practice

- EIA is one of a number of policy tools that are used to evaluate project proposals.
- It is also a relatively recent development when compared to use of economic appraisal methods.
- A number of factors led to the introduction of EIA in different countries, including public concern about the quality of the environment and the increasing effects of new technologies and ever-larger development schemes.
- In addition, then available economic appraisal techniques, such as benefit cost analysis, did not take account of the environmental and social impacts of major projects.
- Today, EIA is applied in more than 100 countries, and by all development banks and most international aid agencies.
- EIA has also evolved significantly, driven by improvements in law, procedure and methodology.

Principles of EIA administration and practice

- To date, EIA has been applied primarily at the project-level.
- This 'first generation' process is now complemented by SEA (**Strategic Environmental Assessment**) of policies, plans and programmes, and both EIA and SEA are being adapted to bring a greater measure of 'sustainability assurance' to development decision making.
- These trends have brought new perspectives on what constitutes EIA good practice and effective performance.





EIA Legislation



Legislation

- The process of Environmental Impact Assessment in the context of town and country planning in England is governed by the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the '2017 Regulations'). These regulations apply to development which is given planning permission under Part III of the Town and Country Planning Act 1990 (Gov.uk, 2018)

Background

- **Requirements**
- An EIA is required from developers where projects may have significant affects on the environment.
- Environmental impact assessments are designed to give due weight to issues of sustainability - environmental, economic and social factors, in relation to planning.

(Department for Communities and Local Government, 2016)



Background

- **Strategic Environmental Assessment (SEA)**
 - 1970s -Environmental impact assessments to be carried out at the levels of policy, plan/program and project. Its application was to be for use in prevention of environmental detriment and integration of environmental aspects into the decision making process (Feldmann, 1998).
 - EU Advice
 - [Overview](#)
 - <http://ec.europa.eu/environment/eia/eia-support.htm>



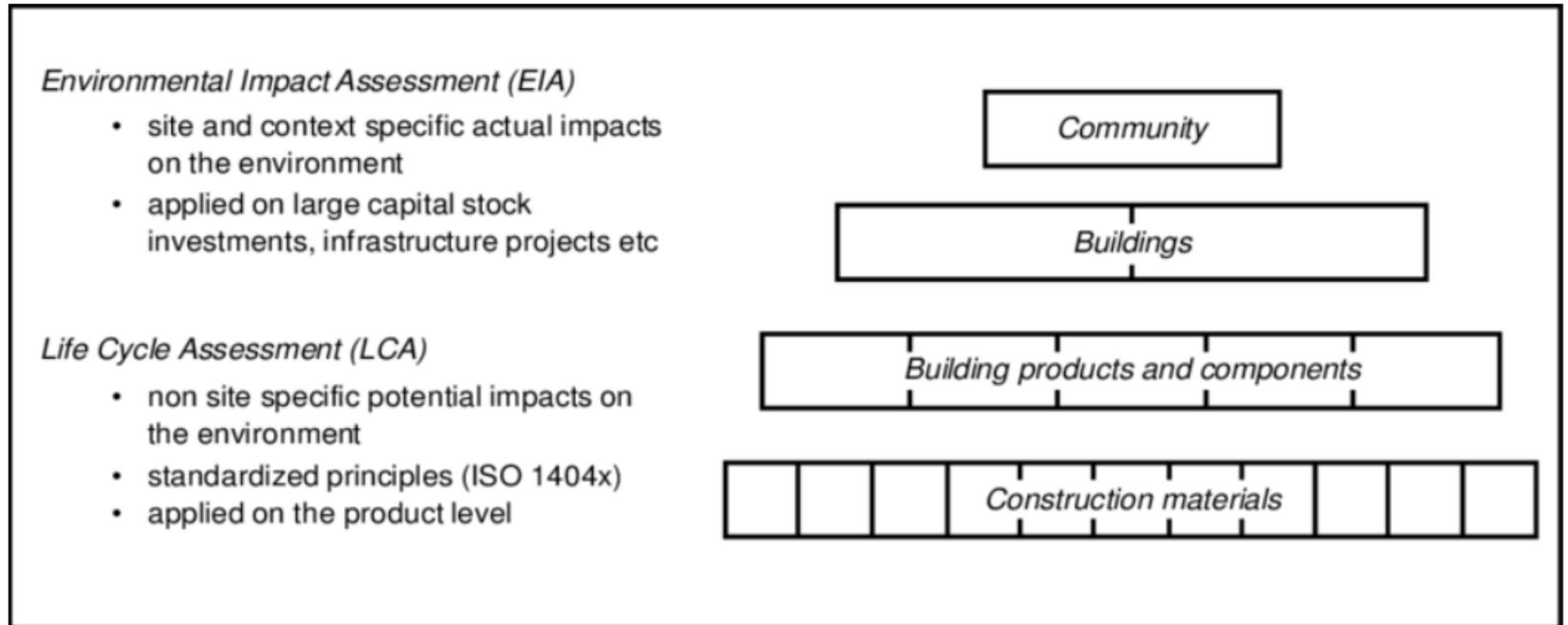
Legislation affecting development

- Town and Country Planning Regulations 1988 Act 1990.
- Town and Country Planning Order 1995
- The Environmental Impact Assessment Regulations 1999 (part of TCPR)
- The Environmental Impact Assessment Regulations 2002 (dealing with uncultivated and semi-natural areas).
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017
[National Archive 2017](#)

Other Legislation

- Conservation of Natural Habitats and of Wild Fauna and Flora Regulations 1994 (commonly Habitats and Species Directive)
- Wildlife and Countryside Act 1981
- Countryside and Rights of Way (CROW) Act 2000
- Protection of Badgers Act 1992
- Hedgerow Regulations 1997
- Tree Preservation Orders.
- SEA Council Directive 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (SEA Directive) etc [Dutch case](#) (10 mins)

Difference to LCA (Crawley, 2015)



Conceptual differences between environmental impact assessment (EIA) and life cycle assessment (LCA).

Critique of EIA Process

Benefits	Flaws
Provides systematic methods of impact assessment	Time-consuming
Estimates the cost/benefit trade-off of alternative actions	Costly
Facilitates the public participation	Little public participation in actual implementation
•Provides an effective mechanism for coordination	Unavailability for reliable data (<i>mostly in developing countries</i>)
•environmental integration	
•negotiations	
•feed back	
Top-level decision making	Too focused on scientific analysis (<i>sometimes</i>)
Triggers an institutional building	Poor presentation of EIA report (<i>bulky volumes, scientific explanation, difficult to understand</i>)
Achieve a balance between the impact of developmental and environmental concern	Compliance monitoring after EIA is seldom carried out

- This week we have covered the definition and process of EIA
- We have examined the Key Stages of an EIA
- What Screening is:
 - Schedules 1 and 2 projects
 - Schedule 3 project considerations
- Had a look at some case study examples which ranged in success and quality.
- We have looked at the Scoping process and visited a virtual consultation for local wind farm development.

Summary



Activity

On your laptops, create a new folder:

Conduct a literature search for your chosen EIA.

Make sub-folders:

Official Documentation

Feedback

Media

Activities for next week:

- Read and review: Government outlines plans to replace 'over-complicated' EIA regime (endsreport.com)
- New legislation proposes radical changes, replacing EIA | UK (environment-analyst.com)

(2) Divergence Series | Divergence in environmental policy post-Brexit – YouTube

Additional suggested readings in Moodle (Week 2)

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Best practice for EIA

ACBA 7004



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Key Guiding Principles for EIA

Continuity - as an integral part of planning, designing and implementation cycle of and development initiative, EIA should run continuously and throughout project cycle.

Participatory - EIA provides a framework for stakeholders and all interested parties to participate in decision-making.

Transparency – EIA facilitates dialogue, predictions and responses in a forum where proponents, decision-makers, experts and the public interact in an open and accessible way in considering the potential impacts of a project on local community, natural resources and environmental quality. All assessment decisions and their basis, should be open and accessible.

Credibility – assessments are undertaken with professionalism and objectivity, using multidisciplinary skills.

Certainty – the process and timing of assessment must be agreed in advance and followed by all participants.

Cost-effectiveness – the assessment process and its outcomes will ensure environmental protection at the least cost to society. It ensures fair and equitable distribution of project costs and benefit. As a minimum, local people in a project area must not be worse-off than they were before a project was implemented.

Flexibility – the assessment should be able to adapt to deal efficiently and effectively with any proposal or decision-making situation.

Practicality – the information and outputs are readily usable for planning, designing and in decision-making.

Accountability – decision-makers are responsible to all parties for decision and actions under the assessment process.



EIA—Three core values

- integrity - the EIA process will conform to agreed standards
- utility - the EIA process will provide balanced, credible information for decision-making
- sustainability - the EIA process will result in environmental safeguards

Source: Sadler, 1996

EIA — guiding principles

The EIA process should be:

purposive —
meeting its aims
and objectives

focused —
concentrating on
the effects that
matter

adaptive —
responding to
issues and realities

participative — fully
involving the public

transparent — clear
and easily
understood

*Source: Sadler,
1996; IAIA/IEMA
1999*

EIA — guiding principles (continued)

- rigorous – employing ‘best practicable’ methodology
- practical – establishing mitigation measures that work
- credible – carried out with objectivity and professionalism
- efficient – imposing least cost burden on proponents

Source: Sadler, 1996; IAIA/IEEMA 1999

Key operating principles of good EIA practice

EIA should:

- be applied to all proposals with significant impacts
- begin early in the project cycle
- address relevant environmental, social and health impacts
- identify and take account of public views
- result in a statement of impacts and mitigation measures
- facilitate informed decision making and condition setting

Source: Sadler, 1996