Geoengineering, atmospheric modification, cloud-seeding, and related topics under the Environmental Information Regulations 2004 (EIR)

Contents

Introduction and context

This document sets out the Met Office's general approach to considering requests for environmental information relating to geoengineering, atmospheric modification, cloud-seeding, and related topics under the Environmental Information Regulations 2004 (EIR).

The Met Office receives a number of requests on these topics every month, often raising similar issues or seeking overlapping categories of information. In the interests of transparency and consistency, we have published this general public interest test to explain how we approach such requests, including the factors we take into account when considering whether regulation 12(4)(b) (manifestly unreasonable requests) may apply.

This document does not represent a blanket refusal policy. Each request is considered individually on its own terms, considering its specific scope, context and the information requested.

The Met Office does not assess requests by reference to the beliefs or motivations of individual requesters. However, where requests are similar in nature or arise within a wider pattern, it is appropriate and necessary to take that broader context into account, as recognised by relevant guidance.

Where requests seek clearly defined recorded information that is not already publicly available and can be provided without disproportionate burden, the Met Office will disclose that information in line with its obligations under the EIR.

The Met Office's position on geoengineering and atmospheric modification

The Met Office is aware that some requests on this topic are framed on the basis that the organisation is engaged in, or carrying out, cloud-seeding, other forms of atmospheric spraying, or covert geoengineering activity. We consider it important to be clear that this is not correct.

The Met Office does not undertake cloud-seeding, atmospheric spraying, or any other form of geoengineering deployment.

The Met Office's role in this area is limited to impartial scientific research, including the use of climate models to explore hypothetical scenarios and assess potential impacts. The Met Office's contribution to scientific research in the field geo-engineering is publicly available and you can access it by visiting our Disclosure Log. This information is regularly reviewed and updated to reflect the most up-to-date position.

Our role in theoretical or modelling-based research does not extend to operational activity or deployment and any suggestion to the contrary is based on a misunderstanding of the nature and purpose of that research. Research is undertaken to understand potential risks, uncertainties and impacts, not to implement or deploy such approaches.

For more information, please see our position statement.

The Met Office has published information explaining its position on these issues, including through its public-facing channels, such as its webpages and disclosure log. This material provides a clear and accessible explanation of the organisation's role and addresses common misconceptions.

Application of regulation 12(4)(b)

When considering individual requests for environmental information on this topic, the Met Office may rely on regulation 12(4)(b) of the EIR where we consider it to be manifestly unreasonable.

This assessment is made objectively and in context. In particular, the Met Office may consider:

- the scope and nature of the specific request;
- whether it forms part of a pattern of similar or overlapping requests;
- the extent to which the subject matter has already been addressed through publicly available information; and
- the likely burden and impact on staff and resources.

The sections below set out how these factors may apply in the context of geoengineering-related requests.

The subject matter of geoengineering, atmospheric modification, or climate intervention research is not inherently unreasonable. The Met Office recognises that there is a genuine public interest in understanding climate science, the scope of publicly funded research, and the role of public authorities in providing impartial evidence to inform policy discussions.

Yet, requests must be considered objectively and in context. Some requests form part of a wider pattern of high-volume, overlapping, and repetitive requests concerning alleged cloud-seeding, “chemtrails”, atmospheric spraying or covert deployment of geoengineering technologies. The premise underpinning many of these requests is that the Met Office is secretly engaged in, concealing, or facilitating atmospheric modification activity.

The Met Office received 36 requests on this topic within the 2025/26 Financial Year, and continues to receive frequent requests, most of which require input from specialist teams. Individual requests may require several hours of staff time, with cumulative impact extending well beyond that when considered together.

In addition to continuing to address this misinformation within individual responses to multiple EIR requests, the Met Office has attempted to publicly addressed this misinformation. For example, our published position explains that misinformation on social media suggests that aircraft contrails are visual signs of attempts to alter the atmosphere or are being used for other nefarious purposes, claims that are without basis and have no verified evidence to support them. Moreover, what misinformation calls “chemtrails” are a well-understood and normal atmospheric phenomenon called contrails, observed by millions of people every day. The Met Office has also stated that it does not engage in adding substances to the atmosphere in order to modify it and does not undertake practical or theoretical research into weather modification.

Some requests have little serious purpose or value beyond pursuing a flawed premise which continues to be addressed both via EIR responses and publicly. Continuing efforts in this regard would require staff to divert more time and resources away from their core public functions, including weather, climate and public safety services, in order to respond.

Why regulation 12(4)(b) is engaged

Regulation 12(4)(b) permits a public authority to refuse to disclose environmental information where the request is manifestly unreasonable. The Information Commissioner's Office (ICO) guidance explains that “manifestly” means the unreasonableness must have an obvious or clear quality. It also explains that the exception protects authorities from manifestly unjustified,

inappropriate, or improper use of the EIR. The Met Office considers that a request on these topics is manifestly unreasonable in so far as the majority of the following factors apply.

1. The request adds little value beyond information already publicly available

The Met Office maintains public webpages explaining its position on atmospheric modification, weather modification, and geoengineering. These explain the distinction between weather modification and geoengineering, address misinformation about contrails , and set out the Met Office's role in impartial research. Where the substance of the request seeks confirmation that the Met Office is not cloud-seeding, spraying or covertly modifying the atmosphere, that position has already been made public. Where the request seeks to use theoretical research as proof of deployment, that interpretation is fundamentally flawed and not supported by the information held.

2. The wider pattern creates disproportionate burden and disruption

The Met Office receives geoengineering-related requests in significant volume, often using similar language, advancing similar allegations, and seeking broad categories of correspondence, research, internal discussion, emails, draft material, workshop records or communications with third parties. The cumulative impact of trying to respond to all of the requests is significant. Even where an individual request may appear manageable in isolation, responding to repeated overlapping requests requires staff to discuss, review, search, collate, consult on and redact material across specialist teams. That diverts resource away from carrying out the Met Office's core public functions.

3. The impact on staff is unjustified

The Met Office must also consider the impact on staff who are repeatedly required to engage with allegations that they, their colleagues, or the organisation, are involved in harmful or covert activity. The concern is not that the Met Office should be shielded from scrutiny or criticism. Public authorities should expect challenge, and the Met Office recognises the importance of transparency in areas of public concern. However, there is a distinction between legitimate scrutiny and repeated requests that continue to pursue allegations which have already been addressed repeatedly. The ICO's guidance recognises that harassment or distress to staff and unjustified disruption or irritation may be relevant when considering whether a request is vexatious or manifestly unreasonable.

In this context, the burden is not limited to administrative time. It also includes the cumulative impact on specialist staff who are repeatedly drawn away from scientific and public duty work to respond to allegations of wrongdoing for which there is no verified evidential basis. Evidence from scientific teams indicates that the repeated receipt of similarly framed requests has caused significant disruption to ongoing work, heightened concern about personal exposure, particularly where requests seek lists of named individuals involved in geoengineering-related research; and anxiety arising from the perceived escalation and persistence of such requests over time.

4. The request is premised on a demonstrably flawed allegation

Some requests appear to proceed from the assumption that the Met Office is involved in, concealing, authorising or facilitating atmospheric spraying, cloud-seeding, "chemtrails" or operational geoengineering activity. That assumption is incorrect. The Met Office has publicly stated that it does not engage in adding substances to the atmosphere in order to modify it and that it does not undertake practical research into weather modification.

Public interest in disclosure

The Met Office recognises the following public interest factors in favour of disclosure.

Transparency about climate and atmospheric science: There is a legitimate public interest in transparency about climate science, atmospheric research, geoengineering-related modelling and the evidence base used to inform public policy. Geoengineering is a matter of public debate, and there is public value in understanding what research the Met Office undertakes, what it does not undertake, and how it distinguishes impartial scientific research from advocacy or deployment.

Accountability for publicly funded research: There is a public interest in understanding how public money is used, what research priorities are being pursued, and whether research is being conducted appropriately, ethically and transparently.

Public understanding and trust: Disclosure can support public understanding and trust by showing the distinction between theoretical modelling, scientific analysis and operational activity. It may also assist in correcting misunderstanding where information is capable of being placed into proper context.

Environmental importance: Requests relating to atmospheric modification, climate intervention or geoengineering engage matters of environmental significance. The EIR contain a general presumption in favour of disclosure, and the public interest in environmental transparency is particularly weighty where the information would genuinely inform public debate.

Public interest in maintaining regulation 12(4)(b)

Existing and ongoing proactive disclosure

The Met Office has taken proactive steps to ensure that accurate, contextualised information about geoengineering and related research is available to the public.

In particular, the Met Office does not regard proactive publication as a static exercise. Relevant business areas periodically review and search for information held in relation to geoengineering, atmospheric modification and related topics and consider whether additional information can appropriately be made available through public-facing channels . The Met Office maintains a public disclosure log, which includes detailed published material addressing frequently raised questions about geoengineering, atmospheric modification, and related topics: https://www.metoffice.gov.uk/policies/foi/disclosure

The Met Office will continue to update its disclosure log on a regular basis, including the addition of further published material where appropriate. This approach ensures that the public has access to a single, authoritative and up-to-date source of information; responses are consistent, accurate and properly contextualised; and new or emerging information is added in a way that reflects scientific integrity and appropriate publication standards.

Where information is suitable for disclosure, the Met Office considers that publication through the disclosure log is a more effective and proportionate means of serving the public interest than responding repeatedly to individual requests framed around the same underlying premise.

In this context the legitimate public interest in transparency is already met through proactive disclosure; the remaining value of repeated bespoke responses is limited; and the burden of responding individually becomes disproportionate.

Protecting public resources from disproportionate diversion

There is a strong public interest in ensuring that the Met Office can devote its finite specialist and administrative resources to its core public functions, including weather forecasting, climate science, public safety services and responding to information requests in a fair and proportionate way.

Repeatedly responding to broad, overlapping or similarly premised geoengineering requests diverts staff time from those functions. The burden is disproportionate where the central premise, that the Met Office is secretly cloud-seeding, spraying or deploying geoengineering technology, is fundamentally flawed and has already been addressed publicly.

Avoiding repeated reconsideration of an established factual position

There is a public interest in public authorities being able to draw a line where allegations have been clearly and publicly addressed. The Met Office has explained that it is not involved in activities such as cloudseeding, or any other activity related to adding substances to the atmosphere to modify it. The Met Office does not undertake weather modification of any kind.

The existence of climate modelling or theoretical geoengineering research does not logically support an allegation of operational deployment. Requiring repeated searches and disclosures to respond to that non sequitur would not materially advance public understanding.

Preserving the safe space for scientific research and analysis

There is a public interest in protecting space for scientists to consider, test, challenge and refine theoretical research before it is complete. This is not a device to conceal wrongdoing or avoid accountability. Rather, it supports scientific integrity.

Premature disclosure of incomplete analysis, draft outputs, internal scientific discussion, or research in progress may risk misleading the public, distorting scientific debate, or presenting provisional material as settled evidence. Where research is still in the course of completion, there is a public interest in allowing appropriate peer review, quality assurance, contextualisation and publication processes to take place before findings are released.

The Met Office's position is that research outputs will be made available through appropriate public disclosure and publication routes once they are sufficiently developed. The science teams will continue to update public-facing information on a regular basis so that the public record reflects the information the Met Office holds and is able to disclose.

Protecting staff from unjustified antagonism

There is a public interest in protecting staff from repeated requests which, in context, are not aimed at obtaining information for a serious evidential purpose but at pursuing allegations of covert or harmful conduct. The ICO accepts that harassment or distress to staff can be relevant to the assessment of vexatiousness or manifest unreasonableness.

The cumulative effect of repeated, similarly premised requests is to require staff to engage with the same or similar allegations that have no evidential foundation. This has led to a chilling effect on normal scientific collaboration and engagement, where staff become concerned that routine professional interactions may be subject to scrutiny divorced from context. There is a clear public interest in avoiding such an outcome, as it risks undermining the quality and openness of scientific research and collaboration.

Balance of the public interest

The Met Office accepts that there is a general public interest in transparency about environmental information and a particular public interest in openness about climate science and geoengineering-related research.

However, the public interest in disclosure can be limited by the nature and context of a request, such as where a request is not a neutral inquiry into a clearly defined area of research, but rather forms part of a wider pattern of requests premised on allegations that the Met Office is involved in cloud-seeding, atmospheric spraying or covert geoengineering deployment.

The public interest is not served by repeatedly diverting public resources away from core public functions.

Additional exceptions under the EIR

The Met Office notes that additional exceptions may also be engaged in relation to specific EIR requests.

Regulation 12(4)(d) - material in the course of completion, unfinished documents or incomplete data

Regulation 12(4)(d) allows a public authority to refuse environmental information where it relates to material in the course of completion, unfinished documents, or incomplete data. In this context, requests often capture draft research outputs, working documents, or data that has not yet been validated or contextualised.

Public interest in disclosure

There is a clear public interest in transparency about environmental research, including:

- supporting public understanding and scrutiny;
- enabling informed debate on geoengineering and climate science; and
- ensuring accountability for publicly funded research.

Public interest in maintaining the exception

There is also a strong public interest in withholding draft or incomplete material where necessary:

- Accuracy and reliability: Draft material may be incomplete and lack full analysis or context. Disclosure risks misleading or confusing the public.
- Scientific integrity ("safe space"): Researchers require space to develop and test ideas before they are finalised. Premature disclosure may undermine the quality of scientific work.
- Appropriate timing of publication: There is a public interest in releasing information once it is complete, verified and contextualised, rather than in a fragmented or provisional form.
- Risk of misinterpretation in a sensitive area: Geoengineering is particularly susceptible to misunderstanding. Draft material may be wrongly interpreted as indicating operational activity or policy intent.

While there is a presumption in favour of disclosure, the balance will often favour maintaining the exception where material is incomplete and disclosure would risk misleading the public or undermining the integrity of ongoing scientific work. In such cases, the public interest is better served by disclosure once the work is complete and can be presented accurately and in context.

Regulation 12(4)(e) - internal communications

Regulation 12(4)(e) allows a public authority to refuse environmental information where it comprises internal communications. In this context, requests may capture internal emails, draft discussions, workshop notes, scientific exchanges, or policy-facing advice between Met Office staff.

There is a clear public interest in disclosure of internal communications where appropriate, including:

- Transparency and accountability: Supporting openness about how scientific work is developed and decisions are informed.
- Public understanding of research processes: Providing insight into how analysis, collaboration and scientific conclusions evolve.
- Confidence in public institutions: Demonstrating that the Met Office acts impartially and robustly in its scientific work.

There is also a strong public interest in maintaining the exception in appropriate cases:

- Safe space for candid discussion: Internal communications allow scientists and officials to test ideas, challenge assumptions and discuss uncertainties openly. Disclosure may inhibit frank and candid exchanges, particularly in complex or sensitive areas.
- Quality of decision-making and scientific output: Protecting internal deliberation supports robust, well-reasoned and properly developed scientific outputs. Premature disclosure of internal thinking may undermine this process.
- Avoiding misinterpretation of informal views: Internal communications may include provisional opinions, incomplete analysis or exploratory discussion. Disclosure risks these being misunderstood as representing settled positions.
- Context and sensitivity of subject matter: In areas such as geoengineering, where there is a high risk of misunderstanding, internal discussions may be particularly prone to being taken out of context or mischaracterised.

The Met Office recognises the presumption in favour of disclosure under the EIR. However, the balance will often favour maintaining regulation 12(4)(e) where disclosure would undermine the ability of staff to engage in free and frank internal discussion, or where it would risk misrepresenting provisional or exploratory analysis. This is not to avoid transparency, but to ensure that information is disclosed in a form that supports accurate public understanding.

Regulation 13 - personal data

Regulation 13 provides that a public authority must not disclose environmental information to the extent that it would involve the disclosure of personal data where such disclosure would contravene the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018.

In the context of geoengineering-related requests, information held may include personal data such as:

- names and contact details of staff;
- identities of individuals involved in research projects or collaborations;
- views or opinions expressed in internal communications; or
- information relating to external partners or stakeholders in a personal capacity.

Where requested information includes personal data, the Met Office will consider whether disclosure would be lawful, fair and transparent under the UK GDPR.

In many cases, particularly where requests seek lists of staff involved in specific research areas, or internal communications containing attributed views or opinions, disclosure would be likely to be unfair, as individuals would not reasonably expect their personal data to be disclosed into the public domain in this context.

There may also be a risk that disclosure could lead to unwanted contact or attention directed at individuals, particularly in areas of research which are subject to public misunderstanding or strongly held views. This is a relevant factor when assessing fairness.

Regulation 13 is an absolute exception, meaning that where disclosure would contravene data protection principles, personal data must not be disclosed and there is no separate public interest balancing test under the EIR.