# ◎ 外刊阅读第7篇

# Earth on verge of five catastrophic climate tipping points, scientists warn

The Guardian
Dec 5, 2023
by Ajit Niranjan

难度指数:★★★☆☆

### ☞ 原文阅读

P1: Many of the gravest threats to humanity are drawing closer, as carbon pollution heats the planet to ever more dangerous levels, scientists have warned.

P2: Five important natural thresholds already risk being crossed, according to the Global Tipping Points report, and three more may be reached in the 2030s if the world heats 1.5C (2.7F) above pre-industrial temperatures.

P3: Triggering these planetary shifts will not cause temperatures to spiral out of control in the coming centuries but will unleash dangerous and sweeping damage to people and nature that cannot be undone.

P4: "Tipping points in the Earth system pose threats of a magnitude never faced by humanity," said Tim Lenton, from the University of Exeter's Global Systems Institute. "They can trigger devastating domino effects, including the loss of whole ecosystems and capacity to grow staple crops, with societal impacts including mass displacement, political instability and financial collapse."

P5: The tipping points at risk include the collapse of big ice sheets in Greenland and the West Antarctic, the widespread thawing of permafrost, the death of coral reefs in warm waters, and the collapse of one oceanic current in the North Atlantic.

P6: Unlike other changes to the climate such as hotter heatwaves and heavier rainfall, these systems do not slowly shift in line with greenhouse gas emissions but can instead flip from one state to an entirely different one. When a climatic system tips – sometimes with a sudden shock – it may permanently alter the way the planet works.

P7: Scientists warn that there are large uncertainties around when such systems will shift but the report found that three more may soon join the list. These include mangroves and seagrass meadows, which are expected to die off in some regions if the temperatures rise between 1.5C and 2C, and boreal forests, which may tip as early as 1.4C of heating or as late as 5C.



P8: The warning comes as world leaders meet for the Cop28 climate summit in Dubai. On Tuesday, Climate Action Tracker estimated that their emissions targets for 2030 put the planet on track to heat 2.5C by the end of the century, despite promises from countries at a previous summit to try to limit it to 1.5C.

P9: The tipping point report, produced by an international team of 200 researchers and funded by Bezos Earth Fund, is the latest in a series of warnings about the most extreme effects of climate change.

# ◎ 思考题

The term "tipping points" in the passage refers to

- A) gradual climate changes caused by human activities
- B) critical thresholds beyond which irreversible changes occur
- C) temporary fluctuations in global temperature
- D) natural processes that slow down global warming



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# Earth on verge of five catastrophic climate tipping points, scientists warn

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#### ◎ 外刊笔记

P1: Many of the gravest threats to humanity are drawing closer, as carbon pollution heats the planet to ever more dangerous levels, scientists have warned.

科学家警告称,随着碳<mark>排放污染</mark>将地球推向愈 发危险的高温水平,诸多威胁人类文明的<mark>重大</mark>危机 正日益逼近。

P2: Five important natural thresholds already risk being crossed, according to the Global Tipping Points report, and three more may be reached in the 2030s if the world heats 1.5C (2.7F) above pre-industrial temperatures.

根据《全球<mark>临界点</mark>报告》,目前已有五个重要的自然<mark>阈值</mark>面临被跨越的风险。如果全球气温较工业化前温度升高 1.5 摄氏度(2.7 华氏度),到 2030年代,还可能有另外三个临界点被跨越。

P3: <u>Triggering these planetary shifts will not cause</u> temperatures to spiral out of control in the coming centuries but will <u>unleash</u> dangerous and <u>sweeping</u> damage to people and nature that cannot be undone.

触发这些全球性转变并不会导致未来几个世纪 气温失控飙升(螺旋上升),但会给人类和自然环 境带来严重且广泛的影响,且这种影响是无法逆转 的。 gravest adj.重大的;严肃的; 黯淡的(grave 的变形)

----- 1-----

【**固**】draw closer 靠近, 临近

pollution n.污染; 噪音污染

threshold n.门槛;阈,起始点,开端

---- 2 -----

**tipping** ①n.倾斜 ②v. (使) 倾斜;给小费 (tip 的现在分词)

【**固】tipping point** 关键点; 临界点

pre-industrial adj.工业化以前的

temperature n.温度,气温

planetary adj.行星的;(与)

地球 (有关) 的 **spiral** ①n.螺旋形; 加剧的 上升 ②v.螺旋式上升(或下

----- 3 -----

【固】out of control 失去控制

降) ③adj.螺旋形的

unleash v.释放出,发泄(力量、感情等)

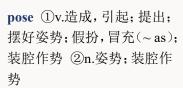
sweeping ①adj.范围广的, 影响大的 ②v.打扫(sweep 的现在分词)

【固】cannot be undone 无 法撤销



P4: "Tipping points in the Earth system pose threats of a magnitude never faced by humanity," said Tim Lenton, from the University of Exeter's Global Systems Institute. "They can trigger devastating domino effects, including the loss of whole ecosystems and capacity to grow staple crops, with societal impacts including mass displacement, political instability and financial collapse."

埃克塞特大学全球系统研究所的蒂姆·伦顿说: "地球系统的临界点构成了人类从未面临过的巨大 威胁。它们可能引发毁灭性的多米诺效应,包括整 个生态系统和主要农作物种植能力的丧失,随之而 来的是大规模(人口)流亡迁移、政治动荡(不稳 定)和金融崩溃等社会影响。"



【固】pose threat(s) 构成威胁

magnitude n.巨大,重要性; 震级;规模,大小;数量, 数值

**institute** ①n.研究所,学院,协会 ②v.制定(制度、规则等)

devastating ① adj. 毁灭性的,极具破坏力的;令人极为震惊的;令人印象深刻的;极有效的,强有力的 ②v. 毁灭,破坏;使极度震惊,使伤心欲绝(devastate 的现在分词形式)

【固】domino effect(s)多米 诺效应

ecosystem n.生态系统 capacity ①n.能力,才能; 容积; 职位; 功率,容积; 生产量,生产能力 ②adj. 满座的

staple ①adj.基本的; 主要的 ②n.主要产品; 主食; 主要部份; 订书钉 ③v.用订书钉订住

【固】staple crop(s) 主要作物:指在某个地区或国家广泛种植的基本粮食或经济作物。

societal adj.社会的;社会组织方式的

mass ①adj.民众的,大量的 ②n.团,块;大量;一群,一堆;大量的东西;群众;大多数;质量 ③v.(使)聚集,(使)集结

**displacement** n.被迫迁徙,流亡;取代;排水量;情感



P5: The tipping points at risk include the collapse of big ice sheets in Greenland and the West Antarctic, the widespread thawing of permafrost, the death of coral reefs in warm waters, and the collapse of one oceanic current in the North Atlantic.

危险的临界点包括格陵兰岛和南极西部大型冰 盖的崩塌,永久冻土的广泛融化,温暖水域珊瑚礁 的死亡,以及北大西洋一股洋流的停滞。

P6: Unlike other changes to the climate such as hotter heatwaves and heavier rainfall, these systems do not slowly shift in line with greenhouse gas emissions but can instead flip from one state to an entirely different one. When a climatic system tips – sometimes with a sudden shock – it may permanently alter the way the planet works.

与其他气候变化(如热浪加剧和降雨增多)不同, 这些系统的变化并非与温室气体排放缓慢同步,而 是可以从一个状态转换到另一个完全不同的状态。 当气候系统发生变化时——有时是突发性冲击—— 它可能永久性地改变地球的运行方式。 转移; 电位移

**instability** n. (形势的) 不稳 定; (行为、情绪等的) 变 化无常

**collapse** n./v.倒塌,塌陷;崩溃;病倒,垮掉;暴跌

------ 5 ------sheet ①n.床单,被单;纸

**sheet** ①n.床单,被单;纸 张;薄板,薄片;一大片(覆 盖物)②v.盖上,裹上;(雨, 雪等)下得很大

thawing ① n.融化 ② v.融化;解冻 (thaw 的现在分词形式)

permafrost n.永冻土层

【**固**】 coral reef(s) 珊瑚礁 current ①n. (水、气、电)流; 思潮, 倾向 ②adj.当前的; 通用的,流行的

【固】 oceanic current 洋流

------6 -----heatwave n 执浪·酷暑期

heatwave n.热浪; 酷暑期 rainfall n.降雨; 降雨量

【固】in line with 与…一致;符合…的计划、想法或期望emission n.排放物,散发物;(尤指光,热,气等的)散发,排放

【 固 】 greenhouse gas emission(s) 温室气体排放 flip ①v. (使) 快速翻转; 快速翻阅; 轻抛/掷; 按(开关) ②n.轻抛/掷; 空翻; 浏览

【**固】flip from... to...** 从… 切换/转变为···

**climatic** adj.气候的,与气候 有关的

permanently adv.永久地



P7: Scientists warn that there are large uncertainties around when such systems will shift but the report found that three more may soon join the list. These include mangroves and seagrass meadows, which are expected to die off in some regions if the temperatures rise between 1.5C and 2C, and boreal forests, which may tip as early as 1.4C of heating or as late as 5C.

科学家警示, (尽管) 这些生态系统突变的具体时间仍存在巨大的不确定性, 但报告发现, 三类生态系统或将很快加入濒危名单: 若全球升温达 1.5至 2 摄氏度, 部分区域的红树林与海草床生态系统将逐渐走向消亡; 而北方森林生态系统的生态临界点则可能最早在升温 1.4 摄氏度时触发, 最迟或延至 5 摄氏度。

P8: The warning comes as world leaders meet for the Cop28 climate summit in Dubai. On Tuesday, Climate Action Tracker estimated that their emissions targets for 2030 put the planet on track to heat 2.5C by the end of the century, despite promises from countries at a previous summit to try to limit it to 1.5C.

此番预警的发布之际,恰逢全球领导人齐聚迪拜参加第 28 届联合国气候变化大会(COP28)。周二,权威气候监测机构"气候行动追踪组织"(Climate Action Tracker)发布评估称,各国为 2030 年设定的排放目标,按计划将使地球在本世纪末升温 2.5 摄氏度——尽管这些国家在上届气候峰会上曾承诺努力将温升限制在 1.5 摄氏度以内。

uncertainty n. 不确定; 犹 疑

----- 7 ------

mangrove n. 红树林植物 (生长在淤泥或河边的热 带树木,有支柱根暴露在空 气中)

seagrass n. 海草 meadow n. 草地: 牧场

【**固**】seagrass meadow 海 草床,海草草甸

【**固**】die off 相继死去;先 后死去

boreal adj.北方带的

【**固】as early as** 早在..., 最早

【固】as late as 最近,直到...,最晚

----- 8 -----

2700 (6.0

【固】COP28(Conference of the Parties)是缔约方之间组织的会议,这里所缔的"约",是指1992年联合国大会通过的、由150多个国家以及欧洲经济共同体共同签署的《联合国气候变化框架公约》(UNFCCC),以序号进行命名。

**summit** n.最高点; 顶点; 山 顶; (政府间的) 首脑会议; 峰会

tracker n.追踪者; 跟踪者; 追踪器



estimate v.估计;估价;估 算 n.估计;估价 emission n. (光、热、气等 的)发出,射出,排放;排 放物;散发物

【**固**】on track 按计划;步 入正轨

P9: The tipping point report, produced by an international team of 200 researchers and funded by Bezos Earth Fund, is the latest in a series of warnings about the most extreme effects of climate change.

这份由 200 名<mark>国际</mark>科研人员团队撰写、贝索斯地球基金(Bezos Earth Fund)资助的临界点报告,成为针对气候变化最极端后果发出的系列预警中的最新例证。

international adj.国际的;多 国的;国际化的;面向国际 的

----- 9 ------

【固】a series of 一系列,

一连串:指一组或一系列相 关的事物或事件

extreme adj.极度的;极大的; 异乎寻常的;严重的;严厉 的;极端的;偏激的;过分

# ◎ 长难句分析

- 1. Triggering these planetary shifts will not cause temperatures to spiral out of control in the coming centuries **but** will unleash dangerous and sweeping damage to people and nature that cannot be undone.
- (1) 主干: 并列复合句,由两个分句通过 but 连接



- 主句①: <u>Triggering these planetary shifts</u> will not cause temperatures to spiral out of control (主+谓+宾+宾补)该句子中,现在分词短语作句子主语
- 主句②: but will unleash dangerous and sweeping damage to people and nature (省略相同主语)
- (2) 修饰:
- 时间状语: in the coming centuries
- 定语从句修饰 damage: that cannot be undone
- (3)译文:触发这些全球性转变并不会导致未来几个世纪气温失控飙升(螺旋上升),但会给人类和自然环境带来严重且广泛的影响,且这种影响是无法逆转的。
  - 2. Unlike other changes to the climate such as hotter heatwaves and heavier rainfall, these systems do not slowly shift in line with greenhouse gas emissions but can instead flip from one state to an entirely different one.
    - (1) 主干: these systems do not slowly shift... but (these systems) can instead flip... (主+并列谓语,否定与转折并列复合结构)
    - (2) 修饰:
  - 对比状语: Unlike other changes...
  - 介词短语作后置定语修饰 other changes: to the climate...
  - 插入语, 举例说明 other changes: such as hotter heatwaves and heavier rainfall,
  - 介词短语作方式状语,说明 slowly shift 的依据: in line with greenhouse gas emissions
  - •介词短语作状语,说明 flip 动作的方向: from one state to an entirely different one.
  - (3) 译文:

与其他气候变化(如热浪加剧和降雨增多)不同,这些系统的变化并非与温室气体排放缓慢同步,而是可以从一个状态转换到另一个完全不同的状态。

- 3. On Tuesday, Climate Action Tracker estimated that their emissions targets for 2030 put the planet on track to heat 2.5C by the end of the century, despite promises from countries at a previous summit to try to limit it to 1.5C.
- (1) 主干: Climate Action Tracker estimated (that)...(主+谓+宾从)
- (2) 修饰:
- 时间状语: On Tuesday (时间背景: 周二)
- 宾语从句,说明估计的具体内容: that their emissions targets for 2030 put the planet on track to heat 2.5C...
- 时间状语: by the end of the century (到本世纪末)



- 让步状语,对比承诺与现实落差,增强批判性: despite promises...
- 后置定语修饰 promise: from countries (来自各国) at a previous summit (在上届峰会上)
- 不定式作目的状语: to try to limit it to 1.5C (3) 译文:

周二,权威气候监测机构"气候行动追踪组织"(Climate Action Tracker)发布评估称,各国为2030年设定的排放目标,按计划将使地球在本世纪末升温2.5 摄氏度——尽管这些国家在上届气候峰会上曾承诺努力将温升限制在1.5 摄氏度以内。

# 第一部分: 问题提出(首段) 以"碳污染导致地球升温"为切入点,强调气候威胁的紧迫性,引出《全球临界点报告》的核心结论 第二部分: 核心概念定义(第二段) 明确"临界点"的定义:气候系统因温度突破阈值而发生的不可逆突变,及其连锁破坏效应 列举五大濒危临界点(冰盖、冻土、珊瑚礁等),对比其与常规气候变化的差异(突发性、不可逆性) 引用科学家观点强化权威性,如Tim Lenton关于"多米诺效应"的论述 第四部分: 动态发展与应对(第六至八段) 第四部分: 动态发展与应对(第六至八段) 第四部分: 耐水方案暗示(未段) 通过"积极临界点"(如可再生能源普及)概念,呼吁系统性社会变革

# ◎ 思考题解析

The term "tipping points" in the passage refers to \_\_\_\_\_.

- A) gradual climate changes caused by human activities
- B) critical thresholds beyond which irreversible changes occur
- C) temporary fluctuations in global temperature
- D) natural processes that slow down global warming

#### 正确选项分析:

• 根据上下文线索,文章多次强调临界点的特征: 一旦突破阈值(如 1.5℃升温),系统将发生不可逆突变(如冰盖崩塌、珊瑚死亡),且可能引发连锁反应(如 "domino effects")。



• 选项 B 准确概括了这一核心定义,而其他选项与文中描述的"突变性、不可逆性"相悖。

# ◎ 类似真题速览

真题	内容
2025 英语二 T3	防止高温的印度
2018 英语二 T2	可再生资源已经到达临界点
2019 英语二 T2	利用森林应对气候变化
2016 英语二 T2	保护小草原松鸡计划
2023 英语一 T3	在学校里教气候变化

#### ◎ 相似真题速做

英(一)2013-T1

P2: This top-down conception of the fashion business couldn't be more out of date or at odds with the feverish world described in *Overdressed*, Elizabeth Cline's three-year <u>indictment</u> of "fast fashion". In the last decade or so, advances in technology have allowed mass-market labels such as Zara, H&M, and Uniqlo to react to trends more quickly and anticipate demand more precisely. Quicker turnarounds mean less wasted inventory, more frequent releases, and more profit. These labels encourage style-conscious consumers to see clothes as disposable—meant to last only a wash or two, although they don't advertise that—and to renew their wardrobe every few weeks. By offering on-trend items at dirt-cheap prices, Cline argues, these brands have hijacked fashion cycles, shaking an industry long accustomed to a seasonal pace.

- 23. The word "indictment" (Para.2) is closest in meaning to ...
- [A] accusation
- [B] enthusiasm
- [C] indifference
- [D] tolerance

