

原 著

地球環境問題と英語（1）—通時的語彙分析—

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<要 旨>

コンピュータによる言語分析の手法を用いて、英語で地球環境問題を語る際に用いられる語彙や表現についての分析と考察を行う。研究対象のコーパスは、地球環境問題の歴史上エポック・メイキング的と考えられる4つの英文公文書テキストから作成する。テキストは、1) “Declaration of the United Nations Conference on the Human Environment” (通称「ストックホルム宣言」) (1972)、2) “Report of the World Commission on Environment and Development: Our Common Future” (ブルントラント委員会最終報告書「地球の未来を守るために」) (1987)、3) “Rio Declaration on Environment and Development” (通称「リオ宣言」) (1992)、4) “Johannesburg Declaration on Sustainable Development” (通称「ヨハネスブルグ宣言」) (2002)の4つである。環境問題に関する特徴的な語や表現は、コーパス中の出現頻度の高い内容語の語彙素から抽出する。抽出されたデータは、英語学習者にとって、現代世界の重要なテーマである地球環境問題について語るための有効な語彙集であると言える。時系列順に分析される各コーパスの特徴を探るために、4つのコーパスの対照分析も行う。

キーワード：地球環境問題、コーパス、英文公文書、英語学習者、語彙集、対照分析

I. はじめに

本研究では、地球環境問題に関する代表的な英文テキストをコーパスとして地球環境問題を語るための語彙や表現の特徴の抽出を試みる。コーパス分析の対象とするのは、次の4つのテキストである：1) “Declaration of the United Nations Conference on the Human Environment” (通称「ストックホルム宣言」) (1972)、2) “Report of the World Commission on Environment and Development: Our Common Future” (ブルントラント委員会最終報告書「地球の未来を守るために」) (1987)、3) “Rio Declaration on Environment and Development” (通称「リオ宣言」) (1992)、4) “Johannesburg Declaration on Sustainable Development” (通称「ヨハネスブルグ宣言」) (2002)。本論では、まず次章で、地球環境問題への取り組みの歴史上には多くの公式英文書がある中でこの4つの文書を画期的な位置を占めるものとして

本研究の分析対象コーパスとした根拠を示すため、国際社会における地球環境問題への取り組みの歴史を振り返ってこれらのテキストが生まれた背景を概観する。第III章以降では、上記4つのテキストを時系列順に分析し考察を加える。各テキストの全文は、紙幅の関係上本論中には引用しないが、最後にAPPENDIXとして添付する。

コーパスの分析にあたっては、当該国際機関の公式サイトからダウンロードした原文テキストをコンコーダンス (KWIC Concordance for Windows Version 4.7 ©2004 塚本聡) にかけて処理を行った。分析を行った各コーパスの語数は「ストックホルム宣言」2,223語、「ブルントラント委員会最終報告書(概要)」9,051語、「リオ宣言」1,307語、「ヨハネスブルグ宣言」1,653語で、合計14,234語となっており、地球環境問題分野の語彙的特徴を抽出するために十分なコーパス・サイズと言えるであろう。

II. 地球環境問題への取り組みの歴史と主要文書

環境問題が地球レベルの問題として初めて体系的に世に問われたのは、1962年に環境保護運動の母レイチェル・カーソン Rachel Carson¹⁾ が発表した著書 *Silent Spring* (Houghton Mifflin, 1962) (邦題『沈黙の春』) によってといわれている。カーソンは同書で化学物質による地球規模の環境汚染が人類の未来を危機に陥れると警鐘を鳴らした。ただし、カーソンの主張に呼応して環境保護運動が全米を始め世界中に出現した³⁾ とは言え、当時の産業界、政界そして学会などからは厳しい批判攻撃を受け、世界が一致して環境問題を焦眉の急と認識するようになるまでにはさらに10年の時を要した。1972年6月にストックホルムで“Only One Earth”をキャッチフレーズとして開かれた「国連人間環境会議」United Nations Conference on the Human Environment (UNCHE) (通称ストックホルム会議)⁴⁾ が開催され、これが国際機構が地球環境を特定のテーマとして招集した初めての会合となった。ここでは環境問題が国際問題であるとの認識を国際社会が初めて公式に示し、「人間環境宣言」Declaration of the United Nations Conference on the Human Environment (通称「ストックホルム宣言」) や環境国際行動計画 United Nations Environment Program (UNEP) が採択された。しかし、一方では貧困こそ最大の環境問題であり、その克服のためには開発が必要であると主張する開発途上国と、今後は開発途上国を含め経済優先の姿勢を改めるべきであると主張する先進国との溝は埋まらないままであった。そこで、国連は1984年に「環境と開発に関する世界委員会」World Commission on Environment and Development (WCED) (通称「ブルントラント委員会」)⁵⁾ を設置した。1987年に同委員会はその最終報告書 “Our Common Future” (邦題『地球の未来を守るために』) によって、環境政策と開発戦略を統合する枠組みを提供する考え方として「持続可能な開発」Sustainable Development の概念を打ち出し、その後の取り組みの重要な指針となった。その流れの中で1992年にはブラジルのリオ・デ・ジャネイロにおいて「環境と開発に関する国際連合会議」United Nations Conference on Environment and Development (通称「地球サミット Earth Summit」)⁶⁾ が開かれ、「持続可能な開発」を中心理念とする「環境と開発に関する「リオデジャネイロ宣言」Rio Declaration on Environment and

Development (通称「リオ宣言」) や、「アジェンダ21—持続可能を実現するための21世紀に向けての具体的行動計画」Agenda21などが採択された。この「地球サミット」の10年後の2002年には、「アジェンダ21」の実施状況を点検することを点検することを主な目的として南アフリカ共和国のヨハネスブルグでいわゆる「環境開発サミット」または「ヨハネスブルグ・サミット」と呼ばれる「持続可能な開発に関する世界首脳会議」World Summit On Sustainable Development (WSSD)⁷⁾ が開催された。このサミットでは、「持続可能な開発に関するヨハネスブルグ宣言」(政治宣言) “Johannesburg Declaration on Sustainable Development” と「ヨハネスブルグ・サミット実施計画」が採択された。

国際社会の環境問題への取り組みの歴史の大枠は上記のようなものであるが、この間にそれぞれの宣言や行動計画を具体化するための取り組みとして様々な会議の開催や組織の創設があった。1988年には「気候変動に関する政府間パネル」Intergovernmental Panel on Climate Change (IPCC) が、世界気象機関 World Meteorological Organization (WMO) と国連環境計画 United Nations Environment Programme (UNEP) により設立され、人為起源による気候変化、影響、適応および緩和方法にかんして科学的・技術的・社会経済的な見地から包括的な評価の報告書を1990年から2007年までの間に4次にわたり発表している⁸⁾。1997年には、1992年の「地球サミット」で採択された「気候変動に関する国連枠組み条約」の詳細を取り決めるために条約の締約国会議のひとつである第3回締約国会議(「地球温暖化防止京都会議」) the 3rd Conference of the Parties to the Climate Change Convention (COP3) が京都で開催され、法的拘束力がある「京都議定書」Kyoto Protocol to the United Nations Framework⁹⁾ が採択され、最終的に2007年に発効した。

以上、地球環境問題への取り組みの歴史を振り返ってみると、エッポック・メイキングであると筆者が考えるテキストは、*Silent Spring*、「ストックホルム宣言」、「ブルントラント委員会最終報告書」、「リオ宣言」、「ヨハネスブルグ宣言」の5つである。しかしながら、このうち *Silent Spring* は、科学者による科学性の高い著作であると同時に、いわゆる「環境文学」とも呼ばれている非常に文学性の高い作品であることも認められており、その他の公文書テキストとは自ずから性格を異にしていることから本研究の分析対象からは除外した。

Ⅲ. 地球環境問題の語彙分析

1. データの範囲

語彙分析は次のような手順で行う。1) 以下4つのコーパスをコンコーダンサーで処理し、テキスト中におけるそれぞれの異語typeの出現回数absolute frequencyの降順リストを作成する。2) 作成したリストから機能語function words と数詞を削除し、contents wordsのみの降順リストを作成する。3) リスト中の高頻度異語high-frequency typesのレマ化を行い、上から30位の高頻度語彙素high-frequency lexemesのリストを作成する。3) コーパス中の総語数total tokensを分母として、各lexemeのテキスト中の出現率Type-Token Ratio (TTR)を数値化する。

データの範囲をレマ化を行った内容語とするのは、本研究が主として地球環境問題を対象としたESP的興味にもとづいているためである。

図表化にあたってのタイトルの表記については、各テキストの名称はその視認性を高めるために、第I章で示した通称を英語表記する。すなわち、“Declaration of the United Nations Conference on the Human Environment”は“Stockholm Declaration”、“Report of the World Commission on Environment and Development: Our Common Future”は“Our Common Future”、“Rio Declaration on Environment and Development”は“Rio Declaration”、そして“Johannesburg Declaration on Sustainable Development”は“Johannesburg Declaration”とする。

2. Declaration of the United Nations

Conference on the Human Environment 「ストックホルム宣言」

1972年6月5日からストックホルムで“Only One Earth”をキャッチ・フレーズに開催された「国連人間環境会議」(ストックホルム会議)は、国連が史上はじめて特定のテーマを話し合うために開いた会合であった。当時、西欧諸国の石炭火力発電所などが排出するばい煙によって引き起こされる酸性雨などの公害被害が顕在化しており、先進国の間では、工業化による公害や開発による自然破壊は、地球環境に深刻な影響を及ぼすと認識されるようになってきていた。同会議で発せられた「人間環境宣言」は、「世界人権宣言」Universal Declaration of Human Rights¹⁰⁾にも匹敵する重要な宣言とされており、ここではじめて基本

的人権のひとつとして「環境権」の考え方が提唱された。環境権は、産業技術の進歩が招いた悲惨な公害被害と地球義母での環境の劣悪化に対するひびくした危機感から生まれた第3世代の人権である。共通見解7項(前文)と26の共通の信念(原則)からなっており、人が尊厳と福祉を可能とする環境で、自由、平等および十分な生活水準を享受する基本的権利を有することが確認されている。「人間環境宣言」の概要は次の通りである。

- 前文—人間環境の保全と向上に関して世界の人々を励まし、導くため共通の見解と原則
- 原則1—健全な環境で生活する基本的権利と環境を保全する責任
- 原則2~7—天然資源の保全(生態系、野生生物、海洋等)
- 原則8—経済社会開発の必要性
- 原則9~12—開発途上国の環境保全対策
- 原則13~17—合理的・計画的な資源管理
- 原則18—科学技術の重要性
- 原則19~20—環境教育、調査研究
- 原則21~22—主権の尊重と管轄地域外の環境を破壊しない義務
- 原則23—環境基準の差異の存在
- 原則24~25—各国の協調、国際機関との協力
- 原則26—核兵器等の破壊

以下に、「ストックホルム宣言」コーパスの基本データを示し、語彙を中心に考察する。コンコーダンサーを用いた処理の結果、TABLE 1に示すように本コーパスの総語数Total Tokensは2223語、総異語数Total Typesは718語、総語数に対する異語の出現頻度Type-Token Ratioは0.322987、語の長さの平均Average Word Lengthは5.483581文字であることがわかった。

TABLE 1 GENERAL DATE OF “STOCKHOLM DECLARATION” CORPUS

Total Tokens	2223
Total Types	718
Type-Token Ratio	0.322987
Average Word Length	5.483581

次に、本コーパス平均のTTR (0.322987) を基準として、TTRが平均以上の内容語の語彙素を高頻度語として以下にリストアップする。リスト中のTTRは小数点3位以下を切り捨てているので、この場合、TTR

が0.32以上のものとする。本論中の高頻度語リストでは、すべて同様の処理を行う。

TABLE 2 HI-FREQUENCY CONTENTS LEXEMES IN "STOCKHOLM DECLARATION"

	FREQ.	TTR
1. be	56	2.52
2. environment	39	1.75
3. principle	26	1.16
4. environmental	24	1.07
5. their	24	1.07
6. country	19	0.85
7. development	18	0.80
8. human	18	0.80
9. all	17	0.76
10. develop	15	0.67
11. man	15	0.67
12. state	14	0.62
13. that	13	0.58
14. have	12	0.53
15. international	12	0.53
16. which	12	0.53
17. improve	11	0.49
18. life	10	0.44
19. resources	10	0.44
20. social	10	0.44
21. need	10	0.44
22. economic	9	0.40
23. people	9	0.40
24. problems	9	0.40
25. common	8	0.35
26. essential	8	0.35
27. such	8	0.35
28. other	7	0.31
29. planning	7	0.31
30. this	7	0.31
31. well	7	0.31
32. world	7	0.31

1972年に発表されたこの宣言では、globalという語は、総語数2223語中1回しか出現していないが、一方internationalは12回 (TTR 0.53) しておりテキスト中の高頻度語のひとつである。このことから、この時点ではまだ環境問題について「地球的」という捉え方は一般的でなかったことが伺える。

3. "Our Common Future" 「ブルントラント委員会最終報告書」

1972年の「国連人間環境会議」以降も、開発途上国と先進国の間には経済か環境かをめぐる激しい対立が続いていたが、1980年半ばをすぎて地球環境問題の深刻さが明らかになるにつれ、世界の各国間には、地球環境問題が21世紀の人類の生存を左右するという共通の認識が生まれた。そのような状況下、「環境と開発に関する世界委員会」World Commission on Environment and Development (WCED) 「ブルントラント委員会」が1987年に発表した最終報告書 "Our Common Future" (邦題『地球の未来を守るために』) によって、人類が地球環境問題に取り組むための共通理念として「持続可能な開発」Sustainable Developmentの概念が提唱された。Sustainable Developmentという言葉自体は、1980年に国際自然保護連合International Union for Conservation of Nature and Natural Resources (IUCN)が地球環境保全戦略を公表した際にはじめて公式に用いられたとされている。しかし、その概念は、本報告書で採用されたことがきっかけで国際的な環境規範として定着し、その後の地球環境保全のための取り組みの重要な道しるべとなった。報告書は12章と2つの付録からなる文書で、その主題であるSustainable Developmentとは、「将来のニーズを満たす能力を損なうことがないような形で今日の世代の必要をみたすような開発を達成すること」と定義されており、先進国と開発途上国との地域間均衡の確保という視点が強調されている。その中では、重要な概念として、「グローバル・コモンズ」Global Commons (地球共有物) という考え方が取り上げられている。これは、公海や領有権が凍結されている南極のようにどこの国の領域にも属さないもの(国際公域)の他、大気圏やオゾン層のようにすべての国に関わるものや、森林の生物多様性のように特定の国に生存・生息する種などのような、人類共通の関心事となるもののことである。Global Commonsへの悪影響のメカニズムは複雑であり、その因果関係の解明は容易ではないため、ブルントラント委員会の宣言以降の国際環境条約では、深刻な環境損害の改善については、原因と損害との因果関係につき十分な科学的証拠がない場合でも、悪影響を防止するための措置を講じるべきとする考え方がとられるようになり、地球温暖化防止をはじめとする多数の国際条約では、地球環境の悪化を防止する国家の義務は国際社会全体にたいして負う普遍的な義務であると考えられるようになった。

てきた。

以下に、“OUR COMMON FUTURE”コーパスの基本データを示し、語彙を中心に考察する。

コンコーダンサーを用いた処理の結果、TABLE 3に示すように本コーパスの総語数Total Tokensは9051語、総異語数Total Typesは2084語、総語数に対する異語の出現頻度Type-Token Ratioは0.230251、語の長さの平均Average Word Lengthは5.397304文字であることがわかった。

TABLE 3 GENERAL DATE OF “OUR COMMON FUTURE” CORPUS

Total Tokens	9051
Total Types	2084
Type-Token Ratio	0.230251
Average Word Length	5.397304

次に、本コーパス平均のTTRは0.230251であるから、高頻度語リストにはTTRが0.23、従ってabsolute frequencyが20以上の内容語の語彙素を抽出する。

TABLE 4 HI-FREQUENCY CONTENTS LEXEMES IN “OUR COMMON FUTURE”

	FREQ.	TTR
1. be	250	2.76
2. that	92	1.01
3. development	90	0.99
4. have	83	0.91
5. world	54	0.59
6. more	51	0.56
7. this	51	0.56
8. environmental	49	0.54
9. their	49	0.54
10. energy	44	0.48
11. need	44	0.48
12. economic	42	0.46
13. international	42	0.46
14. develop	40	0.44
15. human	39	0.43
16. environment	38	0.41
17. nations	38	0.41
18. resources	38	0.41
19. as	37	0.40
20. country	36	0.39
21. it	35	0.38
22. many	35	0.38
23. not	34	0.37

24. change	33	0.36
25. increase	33	0.36
26. we	33	0.36
27. sustainable	31	0.34
28. these	31	0.34
29. global	30	0.33
28. growth	27	0.29
29. most	27	0.29
30. our	27	0.29
31. they	27	0.29
32. people	27	0.29
33. which	26	0.28
34. government	25	0.27
35. new	24	0.26
36. future	23	0.25
37. grow	23	0.25
38. policy	23	0.25
39. present	23	0.25
40. than	22	0.24
41. commission	21	0.23
42. here	21	0.23

本リストでは、前項の「ストックホルム宣言」に比して、globalという語の出現頻度が格段に高まっている。また、高頻度としてリストアップされていない語のうち、本コーパスの内容を特徴づけるものとして特に挙げておきたい語としてはchallenge (FREQ.13, TTR 0.14)があるが、本報告書が発表された1987年の時点では、環境問題をglobalな規模でのchallenge (挑戦=取り組まなければならない難問)として捉えるようになっていたことが見て取れる。

4. Rio Declaration on Environment and Development 「リオ宣言」

1992年6月、ブラジルのリオ・デ・ジャネイロで開かれた「国連環境開発会議」には、参加した約180カ国・地域のうち103カ国は元首または首脳を派遣するなど地球環境問題への国際社会の関心の高さが示され、「地球サミット」Earth Summitと呼ばれる会議となった。その20年前の「環境会議」が、開発や急速な工業化による「人間環境」Human Environmentの汚染が中心的問題とされたのに比較して、地球サミットではすべての動植物を含む生態系やオゾン層、気候など「地球環境」Global Environmentに対する危機意識が中心にあった。「リオ宣言」は、前項のブルントラント委員会最終報告書で提唱された「持続可

能な開発」Sustainable Developmentを中心理念として、前文と27の原則で構成されている。具体的な取り組みについては、同時に採択された全40章から成るAgenda 21「アジェンダ21—持続可能を実現するための21世紀に向けての具体的な行動計画」に詳細に述べられているため、「リオ宣言」自体は総語数1,305語と比較的短いテキストとなっている。

以下に、「リオ宣言」コーパスの基本データを示し、語彙を中心に考察する。

コンコーダンサーを用いた処理の結果、TABLE 5に示すように本コーパスの総語数Total Tokensは1307語、総異語数Total Typesは476語、総語数に対する異語の出現頻度Type-Token Ratioは0.364193、語の長さの平均Average Word Lengthは5.892884文字であることがわかった。

TABLE 5 GENERAL DATE OF "RIO DECLARATON" CORPUS

Total Tokens	1307
Total Types	476
Type-Token Ratio	0.364193
Average Word Length	5.892884

次に、本コーパス平均のTTRは0.364193であるから、高頻度語リストにはTTRが0.36以上、従ってabsolute frequencyが5以上の内容語の語彙素を抽出する。

TABLE 6 HI-FREQUENCY CONTENTS LEXEMES IN "RIO DECLARATON"

	FREQ.	TTR
1. principle	30	2.29
2. states	27	2.06
3. be	26	1.98
4. environmental	25	1.91
5. development	24	1.83
6. environment	14	1.07
7. their	14	1.07
8. international	12	0.91
9. sustainable	12	0.91
10. that	10	0.76
11. all	9	0.68
12. cooperate	8	0.61
13. have	8	0.61
14. country	8	0.61
15. as	7	0.53
16. global	7	0.53

17. nations	7	0.53
18. other	7	0.53
19. people	7	0.53
20. united	7	0.53
21. activities	6	0.45
22. develop	6	0.45
(developmental	3)	
23. national	6	0.45
24. jurisdiction	5	0.38
(judicial	1)	
25. law	5	0.38

本コーパス中、高頻度語としてリストアップされていないもののうち、本コーパスの内容を特徴づけるものとして特に挙げておきたい語としてはresponsibility (FREQ.3, TTR 0.22) とtransboundary (FREQ.2, TTR 0.15) がある。特にtransboundary (境界を越えて) は、internationalや globalというの類義語として新たに用いられるようになった語であるが、環境問題の切実さが一層感じられる語である。

5. Johannesburg Declaration on Sustainable Development 「ヨハネスブルグ宣言」

地球サミットから10年後の2002年には、Agenda 21の実施計画進捗状況の包括的検証ならびに新たに生じた課題について議論することを目的として、World Summit On Sustainable Development (WSSD) 「持続可能な開発に関する世界サミット」(「環境開発サミット」または、「ヨハネスブルグ・サミット」)が、南アフリカ共和国のヨハネスブルグで開催された。

地球サミット以降、開発途上国における持続可能な開発のために不可欠な貧困撲滅eradicating povertyという課題に関して「資金」や「貿易」について先進国と開発途上国の対立が浮かび上がっていたが、「環境開発サミット」では、「持続可能な開発」における「共通だが差異ある責任」common but differentiated responsibilitiesという地球サミットの時に確認された原則をめぐり、両者の対立の構図が鮮明になった。このサミットでは実施計画とヨハネスブルグ宣言(政治宣言)が採択されたが、巧妙にぼかした文書の文言と文法をめぐって政府交渉者たちが攻防を続けた末に、実施計画での公約は細部の取り決めを書いたものとなったと言われている。これまでの宣言declaration、実施計画agenda、報告書report等に比較して、このサミットの文書は、21世紀に人類が直面するもっとも重

要な諸問題に国際社会が協力してどれほど前進できるかについて悲観的な見通しを持たせたという点で特徴的なテキストであるとは言えよう。

以下に、「ヨハネスブルグ宣言」コーパスの基本データを示し、語彙を中心に考察する。

コンコーダンサーを用いた処理の結果、TABLE 7 に示すように本コーパスの総語数Total Tokensは1653語、総異語数Total Typesは604語、総語数に対する異語の出現頻度Type-Token Ratioは0.365396、語の長さの平均Average Word Lengthは5.500302文字であることがわかった。

TABLE 7 GENERAL DATE OF "JOHANNESBURG DECLARATION" CORPUS

Total Tokens	1653
Total Types	604
Type-Token Ratio	0.365396
Average Word Length	5.500302

次に、本コーパス平均のTTRは0.365396であるから、高頻度語リストにはTTRが0.36以上、従って absolute frequency が6以上の内容語の語彙素を抽出する。

TABLE 6 HI-FREQUENCY CONTENTS LEXEMES IN "JOHANNESBURG DECLARATION"

	FREQ.	TTR
1. we	44	2.66
2. development (develop	41 7)	2.48
3. that	26	1.57
4. sustainable	24	1.45
5. be	22	1.33
6. our	21	1.27
7. world	18	1.08
8. summit	13	0.78
9. all	10	0.78
10. as	10	0.78

11. have	10	0.78
12. global (globalization	8 2)	0.48
13. people	8	0.48
14. human	7	0.42
15. johannesburg	7	0.42
16. need	7	0.42
17. make	7	0.42
18. more	7	0.42
19. united	7	0.42
20. agree (agreement	6 1)	0.36
21. challenge	6	0.36
22. commit (commitment	6 4)	0.36
23. continue	6	0.36
24. ensure	6	0.36
25. goal	6	0.36
26. implementation	6	0.36
27. rio	6	0.36
28. this	6	0.36
29. which	6	0.36

本コーパス中、高頻度語としてリストアップされていないもののうち特筆しておきたい語には、eradication (FREQ.3, TTR 0.18) と biodiversity (FREQ.2, TTR 0.12) がある。ともに前出の3つのコーパスには出現していなかった語である。

6. 4つのコーパスの比較

最後に、4つのコーパスのデータを比較対照し、地球環境問題に関するテキスト全般にわたる特徴や性質について考察してみたい。まず、各々の基本データを時系列順に並記するとTABLE 9のようになる。

TABLE 9 GENERAL DATE OF THE 4 CORPORA

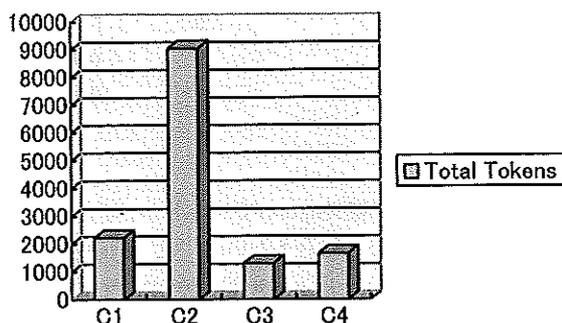
	STOCKHOLM DECLARATION	OUR COMMON FUTURE	RIO DECLARATON	JOHANNESBURG DECLARATION
Total Tokens	2223	9051	1307	1653
Total Types	718	2084	476	604
Type-Token Ratio	0.322987	0.230251	0.364193	0.365396
Average Word Length	5.483581	5.397304	5.892884	5.500302

以下では、データの項目ごとの差異の視認性を高めるためグラフ化し、比較考察を行う。グラフ化にあたって、4コーパスはそれぞれ次のように表記されている。

- STOCKHOLM DECLARATION=C1
- OUR COMMON FUTURE=C2
- RIO DECLARATON=C3
- JOHANNESBURG DECLARATION=C4

まずFIGURE 1では、各コーパスの総語数が比較されている。ここではC2が突出していることがわかるが、テキストのタイプとしては、C2のみは報告書、残りのC1、C3、C4は宣言文であることから、宣言文は一般的に報告書よりも短い文書であることが明らかになっている。

FIGURE 1 TOTAL TOKENS OF THE 4 CORPORA



次にFIGURE 2では、各コーパスの総異語数が比較されている。ここでもまたC2が突出していることがわかるが、報告書であるC2では、宣言文であるC1、C3、C4よりも多様な単語が駆使されていることが明らかになっている。

FIGURE 2 TOTAL TYPES OF THE 4 CORPORA

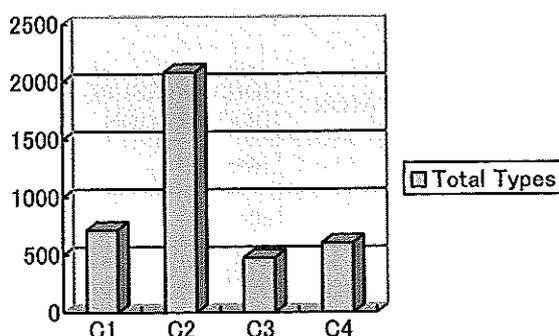


FIGURE 3では、各コーパスのTTR、すなわち、異語の平均出現率が比較されている。ここでは、C2のTTRのみが際だって低いことがわかる。FIGURE 2で見たように、報告書の語彙は宣言文よりヴァリエティに富んだものであるため、特定の語がくりかえし使用される率は低いことが見て取れる。

FIGURE 3 TYPE-TOKEN RATIO OF THE 4 CORPORA

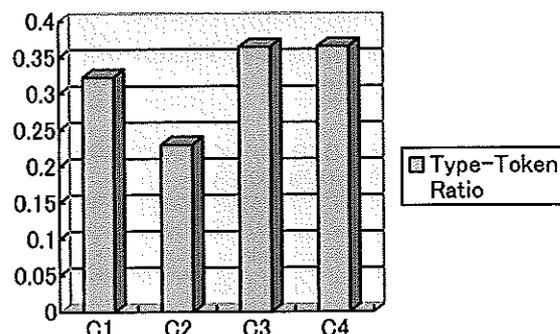
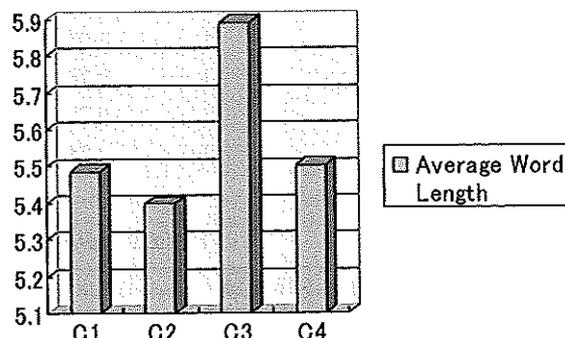


FIGURE 4では、各異語の文字数の平均が比較されている。ここでは、C2 (「地球の未来を守るために」) で用いられている語の平均文字数がいちばん少ないことから、同コーパスでは概して平易な単語が使用されていることがわかる。反対に、C3、(「リオ宣言」) ではいちばん文字数が多い、すなわち、より文語的な単語が多く使用されていることが明らかになっている。残りのC1およびC4の使用語彙のレベルは、同程度であると推測される。

FIGURE 4 AVERAGE WORD LENGTH OF THE 4 CORPORA



最後に、TABLE 10に4つのコーパスを通して、地球環境問題を語るために最低限必要と考えられる76語を挙げておく。この語彙を抽出するにあたっては、各コーパスの出現頻度absolute frequencyの高い順語から、BE動詞、代名詞およびman, country, all, do,

haveなどの基本語を除外したものに、TTRは低くとも、そのテキストの主題を語るために不可欠と考えられる語を各コーパスから加えた。

TABLE 10 A LIST OF ESSENTIAL ENVIRONMENTAL VOCABULARY

account	grow
accountability	growth
accountable	human
achieve	humanity
achievement	implementation
activity	improve
agenda	increase
agree	interest
agreement	international
alliances	judicial
banish	jurisdiction
biodiversity	law
challenge	multilateralism
change	nation
collective	need
commission	order
commitment	participate
common	participation
continue	partnership
cooperate	planet
cost	policy
damage	poverty
degradation	present
develop	principle
development	problem
economic	protect
effective	reaffirm
energy	recognize
ensure	resource
environment	responsibility
environmental	social
eradication	summit
essential	sustainable
future	trafficking
global	transboundary
globalization	united
goal	universal
government	

上記の基本語彙76語は、概ね次のような分類が可能である。

(環境関連) banish, biodiversity, degradation, energy, environment, environmental, planet

(政治・外交関連) achievement, agenda, agreement, alliances, agenda, agreement, alliances, challenge, change, commission, global, implementation, international, judicial, jurisdiction, multilateralism, nation, partnership, policy, principle, reaffirm, state,

summit, united, universal

(社会科学関連) challenge, change, collective, develop, development, eradication, resource, social, sustainable, goal, growth, human, humanity, improve, participate, participation, poverty, responsibility, trafficking, transboundary

IV. まとめ

本論では、地球環境問題そのものではなく、地球環境問題への国際社会の取り組みに関する代表的テキストをコーパスとしたため、各項で高頻度または特徴的語彙として抽出された語は、純粋に環境に関するものは予想外に少なく、TABLE 10の4コーパス全体にわたるリストでも76語中わずか7語であった。残りの特徴語は、政治・外交関連が25語、社会科学関連と見られるものが20語で、残りの24語は特定の分野に関連づけられない語である。これにより、一般市民として環境問題を語るためには、多くの環境関連用語は必要としないことが判明した。また、約30年間にわたる時系列のテキスト分析であるため、時代によって環境と人間との関係がどのように推移変わってきたかを語彙が如実に表わしていることも明らかとなった。

本論では、語彙を中心としたコーパス分析を行ったが、発信型の英語教材としての有用性を高めるためにも、各異語のcollocationsの分析や、それらの用法が英語メディアを通して一般的な使用に供されて行ったプロセスの研究を今後の課題としたい。

注

- 1) レイチェル・ルイーズ・カーソン(Rachel Louise Carson, 1907年5月27日 - 1964年4月14日)は、アメリカ合衆国のペンシルベニア州に生まれ、1960年代に環境問題を告発した生物学者。アメリカ内務省魚類野生生物局(United States Fish and Wildlife Service)の水産生物学者として自然科学を研究。
- 3) 枯れ葉剤散布作戦などのベトナム戦争でのアメリカの非人道的な行為の帰結に悩んでいた若きアル・ゴアもカーソンの勇気ある主張に多大な影響を受け、その後の彼の精神的支柱となったと言われている。
- 4) 1972年6月5日から16日まで世界114カ国が参加して開

- 催され、開催日の6月5日を「世界環境の日」とすることも合意された。
- 5) いわゆる「賢人会議」として、21人の世界的な有識者により構成され、ノルウェー出身の委員長の名をとって「ブルントラント委員会」とも呼ばれた。
- 6) 1992年6月3日から14日まで開かれ、世界180カ国・地域、35の国際機構、約1500のNGOが参加した。20年前の「環境会議」では「人間環境」が中心的課題とされたのに比較して、この会議ではすべての動植物を含む生態系やオゾン層、気候など「地球環境」に対する危機意識が中心になったため、後に「地球サミット」と呼ばれることになった。
- 7) 2002年8月26日から9月4日にかけて行われ、世界190カ国の代表と104人の首脳が集まった他、日本のNGOメンバー400人や世界の企業のCEO1000人を含む国連史上最大規模の市民社会集団の代表8000人あまりにサミットへの公式参加が認められた。このサミットは「アジェンダ21」の実施促進や新たに生じた課題について議論することを目的としたが、10年前の「地球サミット」で確認された「持続可能な開発」における「共通だが差異ある責任」という原則をめぐり、先進国と開発途上国の対立の構図がより鮮明になった。
- 8) 1990年の第1次評価報告書では、人為起源の温室効果ガスがこのまま大気中に排出され続ければ、生態系や人類に重大な影響を及ぼす気候変化が生じるおそれがある旨を指摘した。1995年の第2次評価報告書では、人間活動の影響による地球温暖化が既に起こりつつある相当数の証拠がある旨が指摘された。また、2001年の第3次評価報告書では、近年得られたより確かな事実によると、最近50年間に観測された地球温暖化の影響とみられる現象のほとんどは、人間活動に起因するものである旨が示されるなど、知見の数やデータの精度が増すにつれ、人間活動と地球温暖化との関係について、一層確度が高いものとして言及している。2007年の第4次評価報告書では、「気候システムの温暖化には疑う余地がなく、大気や海洋の世界平均温度の上昇、雪氷の広範囲にわたる融解、世界平均海面水位の上昇が観測されていることから今や明白である。」と報告された。また、「人間活動により、現在の大气中の温室効果ガスの濃度は、産業革命以前の水準を大きく超えて」おり、「20世紀半ば以降に観測された世界平均気温の上昇のほとんどは、人為起源の温室効果ガスの増加によってもたらされた可能性が非常に高い」と述べ、地球温暖化が進行していること、そして、その原因が人間活動によるものであることを科学的にほぼ断定した。
- 9) この議定書は、118カ国が排出量合計(1990年基準)が先進国全体の55%になることが発効の条件であったため、実際に発効したのはロシアが批准した2007年であった。
- 10) 2度の世界大戦に対する反省に立脚した、人権及び自由を尊重し確保するために、すべての人民とすべての国とが達成すべき共通の基準を定めた1948年12月10日にパリのシャイヨ宮殿で開催された第3回国連総会において採択され、各国の憲法に生かされている。

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付録 1

Declaration of the United Nations Conference on the Human Environment

The United Nations Conference on the Human Environment, having met at Stockholm from 5 to 16 June 1972, having considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment,

Proclaims that:

1. Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights the right to life itself.
2. The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all Governments.
3. Man has constantly to sum up experience and go on discovering, inventing, creating and advancing. In our time, man's capability to transform his surroundings, if used wisely, can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and the human environment. We see around us growing evidence of man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and living beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiencies, harmful to the physical, mental and social health of man, in the man-made environment, particularly in the living and working environment.
4. In the developing countries most of the environmental problems are caused by under-development. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment. For the same purpose, the industrialized countries should make efforts to reduce the gap themselves and the developing countries. In the industrialized countries, environmental problems are generally related to industrialization and technological development.
5. The natural growth of population continuously presents problems for the preservation of the environment, and adequate policies and measures should be adopted, as appropriate, to face these problems. Of all things in the world, people are the most precious. It is the people that propel social progress, create social wealth, develop science and technology and, through their hard work, continuously transform the human environment. Along with social progress and the advance of production, science and technology, the capability of man to improve the environment increases with each passing day.
6. A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes. There are broad vistas for the enhancement of environmental quality and the creation of a good life. What is needed is an enthusiastic but calm state of mind and intense but orderly work. For the purpose of attaining freedom in the world of nature, man must

use knowledge to build, in collaboration with nature, a better environment. To defend and improve the human environment for present and future generations has become an imperative goal for mankind—a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of worldwide economic and social development.

7. To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future.

Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions. International cooperation is also needed in order to raise resources to support the developing countries in carrying out their responsibilities in this field. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive cooperation among nations and action by international organizations in the common interest.

The Conference calls upon Governments and peoples to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity.

Principles

States the common conviction that:

Principle 1

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.

Principle 2

The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

Principle 3

The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved.

Principle 4

Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperilled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development.

Principle 5

The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.

Principle 6

The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to

ensure that serious or irreversible damage is not inflicted upon ecosystems. The just struggle of the peoples of ill countries against pollution should be supported.

Principle 7

States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

Principle 8

Economic and social development is essential for ensuring a favorable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.

Principle 9

Environmental deficiencies generated by the conditions of under-development and natural disasters pose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries and such timely assistance as may be required.

Principle 10

For the developing countries, stability of prices and adequate earnings for primary commodities and raw materials are essential to environmental management, since economic factors as well as ecological processes must be taken into account.

Principle 11

The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

Principle 12

Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate- from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose.

Principle 13

In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and coordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population.

Principle 14

Rational planning constitutes an essential tool for reconciling any conflict between the needs of development and the need to protect and improve the environment.

Principle 15

Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects

on the environment and obtaining maximum social, economic and environmental benefits for all. In this respect projects which are designed for colonialist and racist domination must be abandoned.

Principle 16

Demographic policies which are without prejudice to basic human rights and which are deemed appropriate by Governments concerned should be applied in those regions where the rate of population growth or excessive population concentrations are likely to have adverse effects on the environment of the human environment and impede development.

Principle 17

Appropriate national institutions must be entrusted with the task of planning, managing or controlling the environmental resources of States with a view to enhancing environmental quality.

Principle 18

Science and technology, as part of their contribution to economic and social development, must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems and for the common good of mankind.

Principle 19

Education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension. It is also essential that mass media of communications avoid contributing to the deterioration of the environment, but, on the contrary, disseminate information of an educational nature on the need to protect and improve the environment in order to enable man to develop in every respect.

Principle 20

Scientific research and development in the context of environmental problems, both national and multinational, must be promoted in all countries, especially the developing countries. In this connection, the free flow of up-to-date scientific information and transfer of experience must be supported and assisted, to facilitate the solution of environmental problems; environmental technologies should be made available to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries.

Principle 21

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 22

States shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Principle 23

Without prejudice to such criteria as may be agreed upon by the international community, or to standards

which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

Principle 24

International matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all countries, big and small, on an equal footing. Cooperation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all States.

Principle 25

States shall ensure that international organizations play a coordinated, efficient and dynamic role for the protection and improvement of the environment.

Principle 26

Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.

21st plenary meeting

16 June 1972

Chapter 11

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FROM OUR ORIGINS TO THE FUTURE

Adopted at the 17th plenary meeting of the World Summit on Sustainable Development, on 4 September 2002; for the discussion, see chap. VIII of the Summit Report.

- 1 We, the representatives of the peoples of the world, assembled at the World Summit on Sustainable Development in Johannesburg, South Africa, from 2 to 4 September 2002, reaffirm our commitment to sustainable development.
- 2 We commit ourselves to building a humane, equitable and caring global society, cognizant of the need for human dignity for all.
- 3 At the beginning of this Summit, the children of the world spoke to us in a simple yet clear voice that the future belongs to them, and accordingly challenged all of us to ensure that through our actions they will inherit a world free of the indignity and indecency occasioned by poverty, environmental degradation and patterns of unsustainable development.
- 4 As part of our response to these children, who represent our collective future, all of us, coming from every corner of the world, informed by different life experiences, are united and moved by a deeply felt sense that we urgently need to create a new and brighter world of hope.
- 5 Accordingly, we assume a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development ? economic development, social development and environmental protection ? at the local, national, regional and global levels.
- 6 From this continent, the cradle of humanity, we declare, through the Plan of Implementation of the World Summit on Sustainable Development and the present Declaration, our responsibility to one another, to the greater community of life and to our children.
- 7 Recognizing that humankind is at a crossroads, we have united in a common resolve to make a determined effort to respond positively to the need to produce a practical and visible plan to bring about poverty eradication and human development.

FROM STOCKHOLM TO RIO DE JANEIRO TO JOHANNESBURG

8.

Thirty years ago, in Stockholm, we agreed on the urgent need to respond to the problem of environmental deterioration.

Ten years ago, at the United Nations Conference on Environment and Development, held in Rio de Janeiro, we agreed that the protection of the environment and social and economic development are fundamental to sustainable development, based on the Rio Principles. To achieve such development, we adopted the global programme entitled Agenda 21 and the Rio Declaration on Environment and Development, to which we reaffirm our commitment. The Rio Conference was a significant milestone that set a new agenda for sustainable development.

- 2 Between Rio and Johannesburg, the world's nations have met in several major conferences under the auspices of the United Nations, including the International Conference on Financing for Development, as well as the Doha Ministerial Conference. These conferences defined for the world a comprehensive vision for the future of humanity.
- 3 At the Johannesburg Summit, we have achieved much in bringing together a rich tapestry of peoples and views in a constructive search for a common path towards a world that respects and implements the vision

of sustainable development. The Johannesburg Summit has also confirmed that significant progress has been made towards achieving a global consensus and partnership among all the people of our planet.

THE CHALLENGES WE FACE

- 1 We recognize that poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social development are overarching objectives of and essential requirements for sustainable development.
- 2 The deep fault line that divides human society between the rich and the poor and the ever-increasing gap between the developed and developing worlds pose a major threat to global prosperity, security and stability.
- 3 The global environment continues to suffer. Loss of biodiversity continues, fish stocks continue to be depleted, desertification claims more and more fertile land, the adverse effects of climate change are already evident, natural disasters are more frequent and more devastating, and developing countries more vulnerable, and air, water and marine pollution continue to rob millions of a decent life.
- 4 Globalization has added a new dimension to these challenges. The rapid integration of markets, mobility of capital and significant increases in investment flows around the world have opened new challenges and opportunities for the pursuit of sustainable development. But the benefits and costs of globalization are unevenly distributed, with developing countries facing special difficulties in meeting this challenge.
- 5 We risk the entrenchment of these global disparities and unless we act in a manner that fundamentally changes their lives the poor of the world may lose confidence in their representatives and the democratic systems to which we remain committed, seeing their representatives as nothing more than sounding brass or tinkling cymbals.

OUR COMMITMENT TO SUSTAINABLE DEVELOPMENT

16.

We are determined to ensure that our rich diversity, which is our collective strength, will be used for constructive partnership for change and for the achievement of the common goal of sustainable development.

- 1 Recognizing the importance of building human solidarity, we urge the promotion of dialogue and cooperation among the world's civilizations and peoples, irrespective of race, disabilities, religion, language, culture or tradition.
- 2 We welcome the focus of the Johannesburg Summit on the indivisibility of human dignity and are resolved, through decisions on targets, timetables and partnerships, to speedily increase access to such basic requirements as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity. At the same time, we will work together to help one another gain access to financial resources, benefit from the opening of markets, ensure capacity-building, use modern technology to bring about development and make sure that there is technology transfer, human resource development, education and training to banish underdevelopment forever.
- 3 We reaffirm our pledge to place particular focus on, and give priority attention to, the fight against the worldwide conditions that pose severe threats to the sustainable development of our people, which include: chronic hunger; malnutrition; foreign occupation; armed conflict; illicit drug problems; organized crime; corruption; natural disasters; illicit arms trafficking; trafficking in persons; terrorism; intolerance and incitement to racial, ethnic, religious and other hatreds; xenophobia; and endemic, communicable and chronic diseases, in particular HIV/AIDS, malaria and tuberculosis.
- 4 We are committed to ensuring that women's empowerment, emancipation and gender equality are integrated in all the activities encompassed within Agenda 21, the Millennium development goals and the Plan of

Implementation of the Summit.

- 5 We recognize the reality that global society has the means and is endowed with the resources to address the challenges of poverty eradication and sustainable development confronting all humanity. Together, we will take extra steps to ensure that these available resources are used to the benefit of humanity.
- 6 In this regard, to contribute to the achievement of our development goals and targets, we urge developed countries that have not done so to make concrete efforts reach the internationally agreed levels of official development assistance.
- 7 We welcome and support the emergence of stronger regional groupings and alliances, such as the New Partnership for Africa's Development, to promote regional cooperation, improved international cooperation and sustainable development.

24.

We shall continue to pay special attention to the developmental needs of small island developing States and the least developed countries.

- 1 We reaffirm the vital role of the indigenous peoples in sustainable development.
- 2 We recognize that sustainable development requires a long-term perspective and broad-based participation in policy formulation, decision-making and implementation at all levels. As social partners, we will continue to work for stable partnerships with all major groups, respecting the independent, important roles of each of them.
- 3 We agree that in pursuit of its legitimate activities the private sector, including both large and small companies, has a duty to contribute to the evolution of equitable and sustainable communities and societies.
- 4 We also agree to provide assistance to increase income-generating employment opportunities, taking into account the Declaration on Fundamental Principles and Rights at Work of the International Labour Organization.
- 5 We agree that there is a need for private sector corporations to enforce corporate accountability, which should take place within a transparent and stable regulatory environment.
- 6 We undertake to strengthen and improve governance at all levels for the effective implementation of Agenda 21, the Millennium development goals and the Plan of Implementation of the Summit.

MULTILATERALISM IS THE FUTURE

- 1 To achieve our goals of sustainable development, we need more effective, democratic and accountable international and multilateral institutions.
- 2 We reaffirm our commitment to the principles and purposes of the Charter of the United Nations and international law, as well as to the strengthening of multilateralism. We support the leadership role of the United Nations as the most universal and representative organization in the world, which is best placed to promote sustainable development.
- 3 We further commit ourselves to monitor progress at regular intervals towards the achievement of our sustainable development goals and objectives.

MAKING IT HAPPEN!

34.

We are in agreement that this must be an inclusive process, involving all the major groups and Governments that participated in the historic Johannesburg Summit.

- 1 We commit ourselves to act together, united by a common determination to save our planet, promote human

development and achieve universal prosperity and peace.

- 2 We commit ourselves to the Plan of Implementation of the World Summit on Sustainable Development and to expediting the achievement of the time-bound, socio-economic and environmental targets contained therein.
- 3 From the African continent, the cradle of humankind, we solemnly pledge to the peoples of the world and the generations that will surely inherit this Earth that we are determined to ensure that our collective hope for sustainable development is realized.

We express our deepest gratitude to the people and the Government of South Africa for their generous hospitality and excellent arrangements made for the World Summit on Sustainable Development.

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Rio Declaration on Environment and Development

The United Nations Conference on Environment and Development, Having met at Rio de Janeiro from 3 to 14 June 1992, Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972, and seeking to build upon it, With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people, Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system, Recognizing the integral and interdependent nature of the Earth, our home,

Proclaims that:

Principle 1

Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 3

The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

Principle 4

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5

All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

Principle 6

The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

Principle 7

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit to sustainable development in view of the pressures their societies place on the global

environment and of the technologies and financial resources they command.

Principle 8

To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9

States should cooperate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

Principle 10

Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11

States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Principle 12

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.

Principle 13

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

Principle 14

States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

Principle 15

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not

be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Principle 16

National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

Principle 17

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 18

States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States. Every effort shall be made by the international community to help States so afflicted.

Principle 19

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

Principle 20

Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

Principle 21

The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.

Principle 22

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Principle 23

The environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24

Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

Principle 25

Peace, development and environmental protection are interdependent and indivisible.

Principle 26

States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

Principle 27

States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

Source: Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972
(United Nations publication, Sales No. E.73.II.A.14 and corrigendum), chap. I.

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Johannesburg Declaration on Sustainable Development

FROM OUR ORIGINS TO THE FUTURE

Adopted at the 17th plenary meeting of the World Summit on Sustainable Development, on 4 September 2002; for the discussion, see chap. VIII of the Summit Report.

1.

We, the representatives of the peoples of the world, assembled at the World Summit on Sustainable Development in Johannesburg, South Africa, from 2 to 4 September 2002, reaffirm our commitment to sustainable development.

2.

We commit ourselves to building a humane, equitable and caring global society, cognizant of the need for human dignity for all.

3.

At the beginning of this Summit, the children of the world spoke to us in a simple yet clear voice that the future belongs to them, and accordingly challenged all of us to ensure that through our actions they will inherit a world free of the indignity and indecency occasioned by poverty, environmental degradation and patterns of unsustainable development.

4.

As part of our response to these children, who represent our collective future, all of us, coming from every corner of the world, informed by different life experiences, are united and moved by a deeply felt sense that we urgently need to create a new and brighter world of hope.

5.

Accordingly, we assume a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development — economic development, social development and environmental protection — at the local, national, regional and global levels.

6.

From this continent, the cradle of humanity, we declare, through the Plan of Implementation of the World Summit on Sustainable Development and the present Declaration, our responsibility to one another, to the greater community of life and to our children.

7.

Recognizing that humankind is at a crossroads, we have united in a common resolve to make a determined effort to respond positively to the need to produce a practical and visible plan to bring about poverty eradication and human development.

FROM STOCKHOLM TO RIO DE JANEIRO TO JOHANNESBURG

8.

Thirty years ago, in Stockholm, we agreed on the urgent need to respond to the problem of environmental deterioration.

Ten years ago, at the United Nations Conference on Environment and Development, held in Rio de Janeiro, we agreed that the protection of the environment and social and economic development are fundamental to sustainable development, based on the Rio Principles. To achieve such development, we adopted the global programme entitled Agenda 21 and the Rio Declaration on Environment and Development, to which we reaffirm our commitment. The Rio Conference was a significant milestone that set a new agenda for sustainable development.

9.

Between Rio and Johannesburg, the world's nations have met in several major conferences under the auspices of the United Nations, including the International Conference on Financing for Development, as well as the Doha Ministerial Conference. These conferences defined for the world a comprehensive vision for the future of humanity.

10.

At the Johannesburg Summit, we have achieved much in bringing together a rich tapestry of peoples and views in a constructive search for a common path towards a world that respects and implements the vision of sustainable development. The Johannesburg Summit has also confirmed that significant progress has been made towards achieving a global consensus and partnership among all the people of our planet.

THE CHALLENGES WE FACE

11.

We recognize that poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social development are overarching objectives of and essential requirements for sustainable development.

12.

The deep fault line that divides human society between the rich and the poor and the ever-increasing gap between the developed and developing worlds pose a major threat to global prosperity, security and stability.

13.

The global environment continues to suffer. Loss of biodiversity continues, fish stocks continue to be depleted, desertification claims more and more fertile land, the adverse effects of climate change are already evident, natural disasters are more frequent and more devastating, and developing countries more vulnerable, and air, water and marine pollution continue to rob millions of a decent life.

14.

Globalization has added a new dimension to these challenges. The rapid integration of markets, mobility of capital and significant increases in investment flows around the world have opened new challenges and opportunities for the pursuit of sustainable development. But the benefits and costs of globalization are unevenly distributed, with developing countries facing special difficulties in meeting this challenge.

15.

We risk the entrenchment of these global disparities and unless we act in a manner that fundamentally changes their lives the poor of the world may lose confidence in their representatives and the democratic systems to which we remain committed, seeing their representatives as nothing more than sounding brass or tinkling cymbals.

OUR COMMITMENT TO SUSTAINABLE DEVELOPMENT

16.

We are determined to ensure that our rich diversity, which is our collective strength, will be used for constructive partnership for change and for the achievement of the common goal of sustainable development.

17.

Recognizing the importance of building human solidarity, we urge the promotion of dialogue and cooperation among the world's civilizations and peoples, irrespective of race, disabilities, religion, language, culture or tradition.

18.

We welcome the focus of the Johannesburg Summit on the indivisibility of human dignity and are resolved, through decisions on targets, timetables and partnerships, to speedily increase access to such basic requirements as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity. At the same time, we will work together to help one another gain access to financial resources, benefit from the opening of markets, ensure capacity-building, use modern technology to bring about development and make sure that there is technology transfer, human resource development, education and training to banish underdevelopment forever.

19.

We reaffirm our pledge to place particular focus on, and give priority attention to, the fight against the worldwide conditions that pose severe threats to the sustainable development of our people, which include: chronic hunger; malnutrition; foreign occupation; armed conflict; illicit drug problems; organized crime; corruption; natural disasters; illicit arms trafficking; trafficking in persons; terrorism; intolerance and incitement to racial, ethnic, religious and other hatreds; xenophobia; and endemic, communicable and chronic diseases, in particular HIV/AIDS, malaria and tuberculosis.

20.

We are committed to ensuring that women's empowerment, emancipation and gender equality are integrated in all the activities encompassed within Agenda 21, the Millennium development goals and the Plan of Implementation of the Summit.

21.

We recognize the reality that global society has the means and is endowed with the resources to address the challenges of poverty eradication and sustainable development confronting all humanity. Together, we will take extra steps to ensure that these available resources are used to the benefit of humanity.

22.

In this regard, to contribute to the achievement of our development goals and targets, we urge developed countries that have not done so to make concrete efforts reach the internationally agreed levels of official development assistance.

23.

We welcome and support the emergence of stronger regional groupings and alliances, such as the New Partnership for Africa's Development, to promote regional cooperation, improved international cooperation and sustainable development.

24.

We shall continue to pay special attention to the developmental needs of small island developing States and the least developed countries.

25.

We reaffirm the vital role of the indigenous peoples in sustainable development.

26.

We recognize that sustainable development requires a long-term perspective and broad-based participation in policy formulation, decision-making and implementation at all levels. As social partners, we will continue to work for stable partnerships with all major groups, respecting the independent, important roles of each of them.

27.

We agree that in pursuit of its legitimate activities the private sector, including both large and small companies, has a duty to contribute to the evolution of equitable and sustainable communities and societies.

28.

We also agree to provide assistance to increase income-generating employment opportunities, taking into account the Declaration on Fundamental Principles and Rights at Work of the International Labour Organization.

29.

We agree that there is a need for private sector corporations to enforce corporate accountability, which should take place within a transparent and stable regulatory environment.

30.

We undertake to strengthen and improve governance at all levels for the effective implementation of Agenda 21, the Millennium development goals and the Plan of Implementation of the Summit.

MULTILATERALISM IS THE FUTURE

31.

To achieve our goals of sustainable development, we need more effective, democratic and accountable international and multilateral institutions.

32.

We reaffirm our commitment to the principles and purposes of the Charter of the United Nations and international law, as well as to the strengthening of multilateralism. We support the leadership role of the United Nations as the most universal and representative organization in the world, which is best placed to promote sustainable development.

33.

We further commit ourselves to monitor progress at regular intervals towards the achievement of our

sustainable development goals and objectives.

MAKING IT HAPPEN!

34.

We are in agreement that this must be an inclusive process, involving all the major groups and Governments that participated in the historic Johannesburg Summit.

35.

We commit ourselves to act together, united by a common determination to save our planet, promote human development and achieve universal prosperity and peace.

36.

We commit ourselves to the Plan of Implementation of the World Summit on Sustainable Development and to expediting the achievement of the time-bound, socio-economic and environmental targets contained therein.

37.

From the African continent, the cradle of humankind, we solemnly pledge to the peoples of the world and the generations that will surely inherit this Earth that we are determined to ensure that our collective hope for sustainable development is realized.

We express our deepest gratitude to the people and the Government of South Africa for their generous hospitality and excellent arrangements made for the World Summit on Sustainable Development.

English in Global Environmental Issues (1)
— Chronological Analysis of Vocabulary and Expressions—

Kazuko Nishioka

<Abstract>

The purpose of this study is to investigate English vocabulary and expressions used for discussing global environmental issues using a method of computational linguistic analysis. We will examine four epoch-making official documents in the history of global environmental issues in this study. The corpora to be analyzed are “Declaration of The United Nations Conference on the Human Environment” (1972), “Report of the World Commission on Environment and Development: Our Common Future” (1987), “Declaration of the United Nations Conference on Environment and Development”(1992), and “Declaration of the World Summit on Sustainable Development” (2002). Characteristic environmental terms and expressions are identified by listing high-frequency lexemes among the content words in the corpora. The identified set of environmental terms and expressions should serve as a significant resource for English learners to discuss the vital environmental issues in the world today. Contrastive analysis is also made among the four to examine distinctive characteristics of each text.

Key words: environmental issues, corpora, environmental terms, English learners,
contrastive analysis