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Menneskeheden ved vendepunktet: den anden rapport til Romklubben  
Die Menschheit am Wendepunkt: der zweite Bericht des Club of Rome  
Mankind at the turning point: the second report to the Club of Rome  
Stratégie pour demain: le second rapport du Club de Rome  
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De mensheid op een keerpunt: Het tweede rapport voor de Club van Rome

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MENNESKEHEDEN VED VENDEPUNKTET:

DEN ANDEN RAPPORT TIL ROMKLUBBEN

Medforfattere: Mihajlo Meserovic og Eduard Pestel

Romklubben, der blev stiftet i april 1968 af en gruppe på 30 mennesker fra 10 lande og fra mange akademiske grene, har udviklet sig til en uformel organisation, der søger at fremme forståelsen for de indbyrdes afhængige komponenter - økonomiske, politiske, naturbetingede og sociale - i den verden, vi lever i, og fremme nye initiativer og handlinger.

Den første rapport til Romklubben, "Grænserne for vækst", der blev udgivet i 1972, hævdede, at tiden var kommet for en standsning af den verdensomspændende søgen efter fortsat økonomisk vækst og understregede, at tidsskalaen for omvurdering af økonomiske mål var kort: rapporten konkluderede, at uden effektiv handling var det eksisterende verdenssystem "dømt til at bryde sammen inden for de næste 75 år".

Den anden rapport søger at vise, at verden er ved slutningen af en uafhængighedsperiode, og at en integreret plan for "kontrolleret organisk vækst" kræves for at bekæmpe tilbagevendende kriser.

Der vedlægges et resumé af den anden rapport til Romklubben; yderligere dokumentation inkl. udklip fra pressen kan fås hos Generaldirektoratet for Forskning og Dokumentation i Europa-Parlamentet.

Forfatterne til den anden rapport til Romklubben påtænkes at give medlemmerne af Europa-Parlamentet en demonstration af deres metoder og teknik i Hannover i februar 1975.

DIE MENSCHHEIT AM WENDEPUNKT:

DER ZWEITE BERICHT DES CLUB OF ROME

Autorenteam: Mihajlo Mesarovic und Eduard Pestel

Der Club of Rome, der im Jahre 1968 von einer Gruppe von 30 Wissenschaftlern der verschiedensten Fachrichtungen aus 10 Ländern gegründet wurde, hat sich zu einer Organisation entwickelt, deren Ziel es ist, das Verständnis um die voneinander abhängigen wirtschaftlichen, politischen, naturwissenschaftlichen und sozialen Einflußfaktoren auf die Welt, in der wir leben, zu fördern und neue politische Initiativen und Aktionen anzuregen.

Der erste im Jahre 1972 erschienene Bericht des Club of Rome hob hervor, daß die Zeit für eine Beendigung des bisher als notwendig betrachteten wirtschaftlichen Wachstums gekommen sei. Die Zeitspanne für eine Neuorientierung der wirtschaftlichen Zielsetzungen sei allerdings kurz: Der Bericht kommt zu dem Ergebnis, daß das Weltsystem im Falle eines Ausbleibens wirksamer Gegenmaßnahmen dazu "verurteilt ist, innerhalb der nächsten 75 Jahre zusammenzubrechen".

Der zweite Bericht versucht aufzuzeigen, daß sich die Welt am Ende einer Ära der Unabhängigkeit befindet und fordert daher einen integrierten Plan für "ein kontrolliertes organisches Wachstum", um wiederkehrende Krisen zu bekämpfen.

Eine Zusammenfassung des zweiten Berichts des Club of Rome ist beigelegt. Weitere Informationen, darunter Pressekommentare, können von der Generaldirektion Wissenschaft und Dokumentation des Europäischen Parlaments zur Verfügung gestellt werden.

Es ist geplant, dass einige Mitglieder des Europäischen Parlaments im Februar 1975 in Hannover eine Einführung in die Methoden und Techniken des Berichts durch die Autoren erhalten.

MANKIND AT THE TURNING POINT:

THE SECOND REPORT TO THE CLUB OF ROME

Co-authors: Mihajlo Mesarovic and Eduard Pestel

The Club of Rome, founded in April 1968, by a group of thirty individuals from ten countries and from many academic disciplines, has developed into an informal organisation seeking to foster understanding of the interdependent components - economic, political, natural and social - of the world in which we live, and to promote new policy initiatives and action.

The first report to the Club of Rome, published in 1972, 'The Limits to Growth', argued that the time had come to call a halt to the world-wide quest for continued economic growth and emphasised that the time scale for reassessment of economic objectives was a short one: the report concluded that without effective action the existing world system was 'doomed to collapse during the next seventy-five years'.

The second report seeks to show that the world is at the end of an era of independence and that an integrated plan of 'controlled organic growth' is called for to combat recurrent crises.

A summary of the Second Report to the Club of Rome is attached; further documentation including press cuttings may be obtained from the Directorate General for Research & Documentation of the European Parliament.

A demonstration of their methods and techniques is scheduled to be given to Members of the European Parliament by the authors of the Second Report to the Club of Rome at Hanover in February 1975.

STRATEGIE POUR DEMAIN :

LE SECOND RAPPORT DU CLUB DE ROME

Auteurs : Mihajlo Mesarovic et Eduard Pestel

Le Club de Rome, fondé en avril 1968 par une trentaine de personnalités représentant dix pays et rompues aux disciplines universitaires, est devenu un organisme officieux dont le but est d'encourager la connaissance des divers éléments interdépendants - économiques, politiques, géographiques, biologiques et sociaux - du monde dans lequel nous vivons et de promouvoir de nouvelles initiatives politiques ainsi que des programmes d'action.

Le premier rapport du Club de Rome, publié en 1972 sous le titre "Halte à la croissance", démontrait que le temps était venu de décréter une pause dans la recherche mondiale d'une croissance économique continue et mettait l'accent sur le court délai dans lequel devaient être réévalués les objectifs économiques : la conclusion du rapport était qu'à défaut d'actions efficaces le système mondial actuel était "condamné à s'effondrer dans les soixante quinze prochaines années".

Le second rapport cherche à montrer que le monde se trouve à la fin d'une époque d'indépendance et qu'un plan intégré de "croissance organique contrôlée" est indispensable à la lutte contre les crises périodiques.

Un résumé du second rapport du Club de Rome est donné ci-joint ; une documentation complémentaire, incluant un dossier de presse, peut être obtenue à la Direction Générale de la Recherche et de la Documentation du Parlement Européen.

Il est prévu que les auteurs du second rapport du Club de Rome donneront à des membres du Parlement Européen une explication des méthodes et techniques qu'ils ont utilisées ; cette démonstration aura lieu à Hanovre en février 1975.

L'UMANITA AD UNA SVOLTA:

LA SECONDA RELAZIONE AL CLUB DI ROMA

Autori: Mihajlo Mesarovic e Eduard Pestel

Il Club di Roma, fondato nell'aprile 1968 da un gruppo inter-disciplinare di 30 personalità appartenenti a dieci paesi, si è trasformato in una organizzazione informale che si prefigge di promuovere la comprensione delle componenti interdipendenti - economica, politica, naturale e sociale - del mondo nel quale viviamo, nonché di favorire iniziative per nuove azioni e politiche.

Nella prima relazione al Club di Roma sui limiti dell'espansione, pubblicata nel 1972, si sosteneva che è ormai tempo di porre fine all'incessante corsa all'espansione nel mondo e si sottolineava il breve tempo disponibile per attuare un riassetto degli obiettivi economici. La relazione concludeva che, senza una efficace azione, l'attuale sistema mondiale è condannato al collasso entro i prossimi settantacinque anni.

La seconda relazione intende dimostrare che il mondo è giunto al termine dell'era dell'indipendenza e che, per fronteggiare le crisi ricorrenti, occorre un piano integrato di 'espansione controllata'.

Si allega il riassunto della seconda relazione al Club di Roma; una documentazione ulteriore, compresi ritagli di articoli, potrà essere richiesta alla Direzione Generale della Ricerca e della Documentazione del Parlamento europeo.

E' previsto che nel febbraio 1975, ad Hanover, membri del Parlamento europeo assistano ad una dimostrazione degli autori della seconda relazione al Club di Roma in merito ai metodi ed alle tecniche seguiti in questo studio.

De mensheid op een keerpunt :

Het tweede rapport voor de Club van Rome

Schrijvers : Mihajlo Mesarovic en Eduard Pestel

De Club van Rome die in april 1968 door een groep van dertig personen uit tien verschillende landen en met verschillende wetenschappelijke achtergronden werd opgericht, heeft zich ontwikkeld tot een informeel orgaan dat tracht het inzicht te bevorderen in de afhankelijk van elkaar werkende factoren - economische, politieke, natuurwetenschappelijke en sociale - in de wereld waarin wij leven, en dat tot nieuwe politieke initiatieven en tegenmaatregelen tracht aan te zetten.

Het eerste in 1972 verschenen rapport voor de Club van Rome "Grenzen aan de groei" voerde aan dat het ogenblik was gekomen om een halt toe te roepen aan het zoeken naar een voortdurende economische groei. Het legde de nadruk op de korte tijdsruimte waarbinnen een heroriëntering van de economische doeleinden diende te geschieden : de conclusie van het rapport was dat zonder doeltreffende tegenmaatregelen het bestaande wereldsysteem "gedoemd was om in de komende 75 jaren ineens te storten".

Het tweede rapport tracht te bewijzen dat de wereld zich aan het einde van een tijdperk van onafhankelijkheid bevindt en dat een geïntegreerd plan voor "een gecontroleerde organische groei" vereist is om periodieke crises te bestrijden.

Een samenvatting van het tweede rapport voor de Club van Rome is hierbij gevoegd; verder documentatiemateriaal alsmede perscommentaren is verkrijgbaar bij het Directoraat-Generaal voor Onderzoek en Documentatie van het Europees Parlement.

De auteurs van dit tweede rapport zullen vermoedelijk in februari 1975 te Hannover een demonstratie geven van hun methodes en technische systemen aan leden van het Europees Parlement.



MANKIND AT THE TURNING POINT:

THE SECOND REPORT TO THE CLUB OF ROME

Co-authors: Mihajlo Mesarovic and Eduard Pestel

Published: Autumn, 1974

This book is also published in French under the title 'Stratégie pour demain', Ed. Le Seuil, and in German under the title, 'Die Menschheit am Wendepunkt', DVA, Stuttgart.

1. Organic growth

1.1 Mankind is faced by a multitude of crises: the population crisis, the environmental crisis, the world food crisis, the energy crisis, the raw material crisis, amongst others. Solutions are proposed which depend either on the continuation of economic growth or on the voluntary abandonment of such growth as a valid objective: the point of view varies with the imperative necessities of one region of the world as compared with another.

1.2 Growth for growth's sake in the sense of ever increasing numbers and larger size cannot continue forever; in fact growth occurs at varying rates and along different paths in different parts of the world, and it is in the adjustment of the relationships between these variables that solutions must be sought. In this context the world's crises may be turned to account as danger signals.

2. Global crises

2.1 Modern crises differ qualitatively from those of the past in that they are less likely to be resolved in the normal course of events; negative origins (natural disaster and national aggression) have been supplemented by positive causes (e.g. elimination of diseases raises life expectation and contributes to population crises; mining and industrial engineering encroach on the environment; etc.).

2.2 When mankind seeks to impose its own design on nature, it interferes with the process of natural selection, often with unpredictable results. Modern man does, however, possess the know-how to recognise where options exist.

2.3 The questions to be answered are whether the world's crises:

- (a) are persistent, or are attributable to neglect,
- (b) can be resolved at any other than the global level,
- (c) can be resolved piecemeal,
- (d) are rendered more intractable by delay in tackling them,
- (e) can be resolved by cooperation rather than confrontation.

### 3. Emerging world system

3.1 A disturbance of the normal state of affairs in any part of the world quickly affects other regions; the problems arising from the world shortages of grain in 1972 affecting Russia, North America, India, China and Africa emphasise that the world must be viewed as consisting of a world system of interdependent nations and regions.

3.2 The nature of modern crises requires a multiplicity of specialisms for their solution; the report suggests that all actions on major issues must be taken in a global context before potential crises have time to develop.

### 4. Model of world system

4.1 The objective aspects of world development may be represented in terms of a coherent and systematic set of descriptions of relevant relationships (known as a 'model') which may be used to help decide what future course of events appears most desirable. (For the purpose of this study some 100,000 relationships were stored in the computer.)

4.2 The report goes on to consider alternative subjective assumptions; the likelihood of any particular course of evolution is dependent on the validity of these assumptions.

4.3 If the predictions remain the same despite significant variations in the subjective assumptions, the likelihood of the system having the predicted attributes in the future becomes progressively greater. For example, population increase in South Asia and a deficit in food supply in that region are virtual certainties before the end of the century.

4.4 Major characteristics of the present study are:

- (a) the world system is represented in terms of interdependent regional systems,

- (b) these sub-systems are themselves represented in terms of complete physical, ecological, technological, economic and social descriptions,
- (c) allowance is made for the capacity of a living system to avert or minimise predicted calamities.

4.5 The authors are convinced that their analysis indicates that there is a need for:

- (a) 'the establishment of larger communities of nations in the developing world to create a better balance of political and economic power, as well as of cultural influence among the world-regions',
- (b) a change in relationships between nations and regions,
- (c) social changes and changes in individual attitudes.

#### 5. Problems of the developing regions

5.1 If the historical pattern of development is maintained, and the most favourable assumptions about population increase are adopted, the disproportion between average per capita incomes in the developed world and Latin America will increase from 5:1 to 8:1 in the next 50 years. The position is worse in South Asia and Tropical Africa.

5.2 One possible step to narrow the gap would be continuous investment aid in the needy regions; this would involve a substantial annual per capita loss to the developed regions even to achieve a ratio of 3:1 in Latin America and corresponding improvements in other undeveloped regions. The cost would be 50% greater if the commencement of the aid programme were delayed for 25 years; if on the other hand massive aid is provided in the next 25 years, the cost to the developed world might be more than halved. Early action costs only one fifth as much as late action; in addition, it could make possible the complete self-sufficiency of the developing regions by the end of the century.

5.3 The industrialised world can only secure time to develop alternative energy sources by using nearly the entire oil reserves; this effectively preempts the most efficient and convenient energy source precisely when the developing nations need it most. It follows that even massive investment aid is not, by itself, sufficient.

#### 6. The cost of delay

6.1 The economic cost is not the only cost which is multiplied by delay in taking action: maintenance of the present pace of population growth means that the world population will double within the lifetime of those who are already in their middle years.

6.2 Assuming that in all regions the fertility rate declines to an equilibrium level within a fifty year period and that there are no large scale food shortages leading to mass starvation, the end of the century will see four additional people per square kilometre in North America, but 140 additional people in South Asia. (The existing population of Western Europe is at present distributed at 85 people per square kilometre.)

6.3 If a policy of achieving an equilibrium of fertility over a period of 35 years were to be adopted now, the population in the developing world would increase to 6.3 billion (+ 110%); if such a policy is delayed 20 years, the population in the developing world would increase to 10.2 billion. Corresponding figures of anticipated population for the industrialised world are 1.56 billion and 1.72 billion respectively.

## 7. Competition for scarce resources

7.1 In considering oil, as an outstanding example of non-renewable resources, the study concludes that the conflict between the two sides in the dilemma is more apparent than real; cooperation is the only sensible and beneficial path for all participants.

## 8. Limits to independence

8.1 Given that global cooperation offers a much more favourable probability for future development than conflict, all nations must face up to the corollary of increasing interdependence which entails an era of limits to independence.

## 9. A possible solution

9.1 The computer analysis of the world food problem takes account, inter alia, of differing regional dietary requirements, the availability and type of food in the various regions, of climate and cultural factors, the lack of essential dietary components, the type of land and the amount available, the existing economic and human resources.

9.2 The world-wide demand for food, already outstripping supply, can be expected to increase severalfold during the next 50 years and to create conflict situations which will truly be a struggle for survival.

9.3 Because of the number of people affected the problem is greatest in South Asia; making the most optimistic assumptions about population stability, provision of fertilisers, use of arable land, extension of irrigation schemes, the absence of mass starvation, and the adequacy of

food supplies to be imported from other regions, the computer predicts a deteriorating situation in South Asia. If grain imports, for example, are not in fact available, the number of food related deaths in the 50 year period ending in 2025 would be, in the 0-15 age group alone, about 500 million children. Neither concentration of development aid on agriculture (to the detriment of industrial aid) nor a crash programme to achieve early fertility equilibrium, will avert unprecedented disaster in South Asia.

9.4 The study concludes:

- (a) that the only feasible solution to the world food problem requires a combination of
  - (i) a global approach
  - (ii) investment aid, rather than commodity aid, except for food,
  - (iii) balanced economic development,
  - (iv) effective population policies,
  - (v) world-wide diversification of industries,
  - (vi) a change to less wasteful eating habits in the affluent part of the world,
- (b) that mankind's options for avoiding catastrophe are decreasing and that delays in implementing the options are, quite literally, deadly.

## 10. The energy crisis

10.1 The number of nuclear reactors required to meet increasing demands for energy, the cost and physical resources that would need to be committed, the necessity of replacing worn out installations, and the risk to health and environment from nuclear by-products on a vast scale make it improbable that the world's energy problems can be resolved by reliance on nuclear energy sources.

10.2 Any satisfactory solution must successfully combine:

- (a) a short term strategy to ensure a supply of oil sufficient to maintain the socio-economic stability of the oil importing regions,
- (b) an intermediate strategy to supplement primary sources with coal, gas and liquified coal,
- (c) a long term strategy based on solar energy, with production centred on present oil producing regions.

11. Epilogue

11.1 There is no more urgent task in the quest for peace than to help guide the world system on to the path of organic growth.

11.2 A new global ethic is required, comprising:

- (a) individual awareness of membership of the world community,
- (b) responsibility in the use of material resources,
- (c) a harmonious relationship with nature,
- (d) a sense of identification with future generations.