

SUSTAINABILITY AND INSTITUTIONS - CATCHWORDS OR NEW AGENDA FOR ECOLOGICALLY SOUND DEVELOPMENT?¹

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Summary

The present paper suggests the term sustainability to be indeterminate and therefore useless or even counterproductive if assumed to be a concept or guideline for development. In a development aid context, the term might be considered as a reminder of the economic, ecological, social and institutional dimensions of development. Neoclassical welfare and growth theory in restricting its analysis of sustainability to market transactions is considered insufficient in guiding policies for sustainable resource use. In rural areas of developing countries not only markets but also non-market and non-government institutions and organisations are seen as instrumental in improving efficiency and sustainability of projects fostering ecologically sound development. NGOs are seen to be well placed to support local communities in the planning of their development, in their gaining access to markets, government services and development aid on equitable terms, and in collective action for the sustainable use of natural resources. The paper makes reference to Peru, where environmentally oriented local NGOs are supported by international donors and northern NGOs in strengthening local governments and in developing institutions for the coordination and guidance of outside interventions. District planning systems including planning councils, technical assistance networks, concertation and working roundtables, and project fairs are considered transaction cost saving institutional innovations.

¹ The paper contains some conclusions from a review of literature done during a stay as Visiting Fellow at the Institute of Development Studies. I am grateful to several colleagues for suggestions and comments on a draft of the table in section 2.1, in particular to Bob BAULCH, David EVANS, Thomas FISHER, Anne-Marie GOETZ, Charles HARVEY, Simon MAXWELL, Robin MEARNs, who also was so kind to act as my academic sponsor, and to Ian SCOONES, Adrian WOOD and Hans SINGER, Caroline PYBUS, and other IDS colleagues who helped make my stay at IDS both enjoyable and productive. I am also grateful to Roderick OGLEy, to Rainer MARGGRAF, University of Göttingen, to my colleagues in Heidelberg, and to participants of the Symposium on 'Food Security and Innovations: Successes and Lessons Learned' at the University of Hohenheim in March 1996. A FIA discussion paper (HATZIUS, T: Institutional Analysis for Sustainable Development and Natural Resources Management - A Conceptual Framework for Participatory Policy Analysis and Action Research) with more references and a methodological framework for institutional analysis in the context of local natural resource management will be forthcoming. Observations on this paper and particularly on the table are welcome.

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1. Introduction

In recent years, a significant increase in the appearance of the terms 'sustainability' and 'institutions' in development policy papers suggests yet another quality label for aid projects. The label 'sustainable' now usually referring to an environmental constraint to be considered in development, however, is not completely new to development economists. Using growth as an indicator for development they have been concerned with conditions for, and paths of sustainable growth for quite some time. With a simplistic, economic efficiency oriented approach to development and a reduced set of constraints considered in their models they came up with straightforward policy recommendations. And even now, as discussions on sustainability, spearheaded by environmentalists and sometimes led with a highly emotional and pessimistic undertone, neoclassical economists keep their optimism concerning the sustainability of present growth paths and development patterns. Reassured by their belief in the complete substitutability of factors of production and by concentrating on market prices as the proper values of goods and services, mainstream economists have confidence in human ingenuity, individual decision making, and market forces aided by well dosed government interventions to guide economies and societies on to sustainable development paths. Empirical evidence from aggregate analyses of growth processes in the past, based on only a few variables for which data can be readily found in aggregate statistics and national accounts reinforces this optimistic attitude. There is probably no country where the traditional indicators for measuring national welfare - per capita national product, income or consumption - do not eventually show an increase over the years and where the pattern of demographic transition from a 'high population growth - low income' towards a 'stable population - high standard of living' situation is not eventually indicated. Scientists now point to a similar pattern of an ecological transition from a 'low income - high per capita pollution' to a 'high income - low per capita pollution' phase explained by the availability and application of abatement technology which becomes affordable at high per capita income levels (BALDWIN, 1995). Policy recommendations for sustainable development resulting from such analyses are, accordingly, measures to increase per capita income growth supported by policies to reduce fertility rates in the case of population growth and policies to promote the generation and to increase the profitability, and thus spread the use of abatement technologies in the case of environmental degradation. Markets are seen as the most efficient institutions for allocating resources, coordinating individual decisions, and providing signals of factor scarcities, profit opportunities, and incentives for socially beneficial activities; government intervention, on the other hand, is considered a second best alternative and only recommendable and necessary in cases when markets fail to allocate resources efficiently and when other social goals are concerned.

For most environmentalists, however, economic growth is considered the cause for the destruction of the environment rather than a remedy (see e.g. EHRLICH, EHRLICH & HOLDREN, 1975; DALY, 1991). The "heedless consumer-culture (particularly in the developed world) and the unmitigated faith in the ability of science and technology to provide ever-increasing levels of consumption and supposed "welfare" ... needs to be changed in the relationship with the Earth ... the roots of the matter have to do with stewardship, equity, justice, and the inherent worth of living things. Ethics, values, and religions are keys to the necessary altered attitudes and behaviours" (HAMILTON, 1993: 3). Whereas some environmentalists just have a pessimistic view about the non-sustainability of present development paths inferred from past rates of deforestation, soil loss or extinction of species etc. (see e.g. BROWN & KANE, 1995), for others the conservation of nature in its original state is a matter of principle and 'weltanschauung' (basic world view). Seeing nature on equal terms with humans in its right to survive, this particular group within the wide spectrum of the environmental movement (deep-ecologists), if interpreted literally, is opposed to development when it means using nature for the improvement of human well-being or welfare and converting natural into man-made physical capital for present or future consumption³. Corresponding policy prescriptions are the conservation of nature to be attained by direct state intervention as well as by raising people's awareness and consciousness. Questions of how to accommodate and solve other basic problems in society, particularly how to provide sustainable alternative livelihoods for people directly depending on the exploitation of natural resources, are mostly ignored. And while markets are seen unfit for allocating resources and for generating prices as signals of the value of nature and environmental resources, generally no alternative model for the valuation, allocation and distribution of environmental goods e.g. through a central planning mechanism is proposed. Even though sometimes referred to as 'water melons' (green on the outside, red within) suggesting a left wing political tendency of environmentalists, they rarely do adhere to utopian socialist ideas. Quite the contrary. Well organised into thousands of NGOs (non-governmental organisations) on a local, national and international level environmentalists and other social groups concerned about specific societal ills are increasingly filling a gap in the institutional mesh of capitalist civil society (see e.g. PRINCEN & FINGER, 1994). In a variety of roles reaching from basic research to the collection, analysis and distribution of information on societal ills to inducing collective action to boycott markets and to pressurise governments NGOs take influence where markets and state institutions appear unable to come up with solutions to societal problems. Far from being utopians they have often shown a considerable resilience and skill in dealing with national and international capitalist markets and state institutions.

³ In other words, they reject the mainstream economists' position of 'weak sustainability' which requires natural capital used up in the growth process to be at least replaced by the same amount of man-made capital; see e.g. PEARCE & TURNER, 1990.

In a rural development context NGOs have often shown a particular understanding of local needs, culture, knowledge, ecosystems, institutions and organisations and have increasingly been involved in development programmes financed by international donors. As opposed to the often limited duration of these public donor financed programmes, NGOs usually stay on in a geographical area receiving funds and support from a variety of frequently changing private or public, national or international sources. There is, of course, no unanimous praise for the work of NGOs as they are quite heterogeneous with respect to their goals, their understanding of development, their particular skills and their way of approaching local communities in developing countries. With the appearance of environmental NGOs, often very narrowly motivated for promoting conservation, organic farming practices or reforestation, there is even more heterogeneity in objectives, approaches and views on how to respond to the short-run livelihood needs of rural populations and in particular the rural poor, while preserving or restoring the natural resource base.

2. The term 'sustainability' in development research and policy

The term sustainability in the context of development always has a connotation of something desirable and long-lasting. There is, however, no consensus, neither on an operational definition nor on a policy prescription of how to reach it, and there is little hope for this in the near future. This is the conclusion of a review, done by the author, of some recent literature on environmental degradation and sustainability in the context of rural development. Rather than listing the whole variety of definitions and presenting specific concepts in detail, some of the more important features of three concepts frequently referred to in the literature are presented here in a table. 'Ecological Sustainability', 'Sustainable Development' and 'Sustainable Growth' are the terms chosen as column labels. None, however, stands for a distinct, well defined concept or for an operational set of policies. They rather represent three overlapping sections or categories in a continuum. The 'subject matters' chosen as labels for the rows and the characterisation of these categories have been selected quite arbitrarily. They are meant to reflect aspects which caught the eye while assessing approaches to sustainability and trying to come up with an operational concept. As the main concern of the review has been resource degradation in rural areas of developing countries there is a bias towards aspects, activities and research methods applicable to this general area. This explains the emphasis on action-oriented research in the case of 'ecological sustainability' and on economic theory in the case of 'sustainable growth'.

Ecologists are certainly the challengers in the debate on sustainability - on a local as well as a global level. They explicitly take position and consider action, they concentrate on informing

and lobbying and seem to be less concerned with a sound scientific base. Mainstream economists, on the other hand, tend to hold on to familiar concepts based on the neoclassical model of a market economy, are defensive, and increasingly uneasy about their limited ability to respond to central societal problems. Some are exploring into new fields like evolutionary and transaction cost economics, game theory, or contingent valuation studies in order to find answers to central societal questions such as the right to use or abuse nature, the inter- and intragenerational distribution of property rights in natural resources, and the attenuation or solution of conflicts in resource use on the local, national and international level.

2.1 Ecological sustainability vs. sustainable growth - two opposing views

'Ecological sustainability' and 'sustainable growth' in the following table can easily be recognised as the two principal positions of environmentalists and mainstream economists respectively sketched in the introduction. Even though defenders of both positions generally proclaim their concern about the future of society their research and policy approaches are mostly limited to particular aspects or subsystems of society (nature, agro-ecosystems, the economy) leaving out others (see e.g. BROWN et al. 1995: 17). This heterogeneity is reflected in the different disciplines, theoretical approaches, and methods involved in environmental research and policy analysis ranging from ecology and biology in the natural sciences to economics in the social sciences. Concerning the underlying world view ('weltanschauung') anthropocentrism seems to be the 'normal' position even among most advocates of ecological sustainability. It requires the understanding of philosophical, social, religious and cultural dimensions and a historical perspective when considering the relationship between man and nature in different socio-economic contexts. This relationship determines attitudes and preferences and thus people's behaviour, a central variable in environmental and economic research and in the design of development policies (see e.g. SENANAYAKE, 1993; ROHRMOSER, 1994; SHARMA, 1994; STEINER, 1994).

From ecological sustainability to sustainable growth - a range of concepts

Subject Matter	Ecological Sustainability	Sustainable Development	Sustainable Growth
<i>Major concerns</i>	ecosystems and biosphere	people's livelihoods, economy, society	economy, markets and prices
<i>Major goal</i>	ecological viability	social efficiency, justice	economic efficiency
<i>Major disciplines/theoretical base</i>	natural sciences, biology, ecology	agricultural and social sciences: 'old' and some 'new' institutional, evolutionary and ecological economics, bioeconomics, sociology, ethics, anthropology, ethnology	neo-classical and new institutional economics, new political economy, rational choice theory
<i>Basic world view</i>	equilibrium focused pessimist, nature centred	basically evolution focused optimist, anthropocentrist	equilibrium focused optimist, anthropocentrist
<i>Principal activities</i>	information gathering and diffusion, lobbying, action research on ecosystems, traditional and organic agriculture, education, define carrying capacities,	case studies on sustainable social systems, FSR, improving methodology, policy analysis	modelling, refining theory and methods by challenging assumptions of basic model: behaviour, transaction cost; policy analysis
<i>Research methods</i>	participatory action research, cumulative learning seeking diversity, group inquiry, facilitating expert, change debate, ethno-histories, mapping	participatory rural appraisal methods, farm-household-models, systems analysis, games of competition and conflicts in natural resources use in real life settings	applied welfare economics, econometric and analytical growth models, game, dynamic programming, general equilibrium (analytical/computable) and partial market models
<i>Research approach</i>	value led activist (values explicit)	value interested analyst (values explicit)	value neutral analyst (values implicit)
<i>Major advantages</i>	strong ethical base as source of energy to present and push ahead alternative concepts of development and help in implementation, concern and involvement	addresses problems of equity, culture, institutions, social structure, governance, entitlements, distribution, conflict solution based on thorough case studies	widely accepted theoretical and methodological basis for hypothesis testing, structuring of problems and modelling of economic decision-making situations
<i>Major flaws</i>	analyses equilibria, lack of theory, often dogmatic, north-based, avoiding issues of political and economic feasibility, heterogeneous organisations	lack of formal theory for rigorous testing of hypotheses, descriptive, multiplicity of disciplines hinders communication	analyses equilibria, applies only to market exchange, behavioural assumptions restrictive, avoids issues of entitlements, equity
<i>Major concerns with respect to quantification of sustainability</i>	rates of growth of population, loss of rain forests and top soil, reduction in biodiversity, increase in deserts, pollution and corresponding projections	specific and aggregate social indicators, case-studies on people's livelihoods, coping and conflict solving strategies, time and space specific carrying capacities	rates of growth of income or consumption based on national accounts resp. market-valued flows of goods and services; social welfare and utility concepts non-operational
<i>Major policy prescriptions</i>	protect nature, educate people	empower people, develop institutions	develop markets and internalise externalities

Pessimism or optimism manifests itself in the information on issues of sustainability or environmental problems provided by different organisations. Personal attitudes as well as intentions and interests often serve as filters in the perception of the problem and predetermine its presentation. Pessimism seems to prevail among the defenders of ecological sustainability, if only to induce problem consciousness and 'angst' (anxieties) and a corresponding change of behaviour of individuals and corporate actors as well as of government policies. Projecting past rates of decrease of biodiversity, forests or ozone cover into the future without considering any countervailing forces, like innovations and alternative policies will necessarily lead to the conclusion that the present rates of resource use and patterns of consumption are non-sustainable. The pessimistic outcome of some of the analyses of international organisations such as UNEP (United Nations Environmental Programme) and FAO (Food and Agriculture Organization of the United Nations) or NGOs such as the Worldwatch Institute, WWF (Worldwide Fund for Nature) and IUCN (International Union for the Conservation of Nature) are quoted and reproduced by green activists and NGOs with the explicit objective of influencing public opinion, attracting or generating funds for projects, changing patterns of thinking and behaviour in society, or, just plainly justifying their own existence. From the position of some scientists and particularly orthodox economists such research would be considered value-led, lacking impartiality, and therefore objectionable and useless.

Mainstream economists on the other hand, as has been pointed out before, are basically optimists. With their established reductionist but consistent model of an economy, neoclassical economists concentrate on a reduced set of central variables and use mathematical and statistical methods to impute values for goods and services and conditions for the optimality of resource allocation, seen as the central and - for economists - only relevant goal in society. By reducing the analysis to a single central variable (per capita growth of consumption, of the national product, a measure of all goods and services produced in an economy or of the income derived from it) and to a few central explanatory variables such as population growth, physical capital and technological progress, macroeconomic growth models leave out critical variables related to the state of the environment, only now being recognised as a severe constraint. Using data from national accounts, particularly designed to come up with the information needed to analyze such model economies, optimism is a built-in feature, as no structural brakes or disturbances are considered and no critical social and environmental variables allowed. With the limited correspondence to real world conditions, inferences for practical policy are mainly of a rhetorical nature and of little use to solve real life problems (see e.g. BARTELMUS, 1994; BRUNS, 1995). It is only too

obvious that no alarming messages about the future of the 'spaceship earth' will come from the right hand side of the spectrum indicated in the table.

There is one feature in both the ecological sustainability and sustainable growth schools of thought and corresponding research which is an abstraction of real world phenomena and therefore haunts discussions on unsustainable development paths and the impact of consumption or population growth on the environment. It is the preoccupation with equilibria and with optimal conditions, either for agro-ecosystems (land-man ratios, carrying capacities) or for the efficient allocation and pricing of resources in an assumed competitive equilibrium of an economy. Using simplified models to better understand real world phenomena and to communicate ideas within or between disciplines is, of course, necessary and useful. Often, however, the reliance on simple models or on 'received' or 'common' knowledge might blur the vision for reality. Sometimes researchers forget the simplifying assumptions of their models when interpreting research results and recommending policies and often lack openness to alternative approaches, related disciplines, and - in the case of rural development - 'non-scientific' traditional knowledge to gain additional insights.

There are indications of misunderstandings and misconceptions about real natural, social and economic systems often leading to inappropriate, ineffective, or even counterproductive policy recommendations to combat environmental degradation. Interesting examples can be found in a recent collection of contributions by researchers of a variety of disciplines (mainly history, ecology, and social anthropology) in which particularly the 'received wisdom' nexus between rapid population growth and environmental degradation in parts of Africa has been questioned. "Overgrazing and the 'desertification' of drylands, the widespread existence of a 'woodfuel crisis', the rapid and recent removal of once-pristine forests, soil erosion, and the mining of natural resources caused by rapidly growing populations ... these images may be deeply misleading" (LEACH & MEARNS, 1995:1). Even though the contributors make the case- and place-specificity of their analyses quite clear, their research results point to the difficulties of drawing general conclusions about 'ecological sustainability' or 'environmental degradation'.⁴

As a consequence, designing projects and policies to enhance ecological sustainability on the local level (e.g. anti-desertification measures, afforestation on mountainous slopes, fencing in

⁴ Misconceptions about environmental degradation in the Himalayas, its causes and 'vicious circles' have been discussed by IVES & MESSERLI, 1989 among others. THOMPSON, 1995: 29 concludes "decades-worth of policy has been directed at providing the solution to what is not, in fact, the problem". He refers to a 'cultural theory' and 'social constructions of reality' first studied by ecologists showing that there is no 'one reality' of environmental degradation or sustainable development but that it depends on the specific actor ('myth-holder') how he/she sees or wants to see reality ('plural rationalities framework'). He uses the example of wood fuel consumption to show how a development agency (in his case FAO) defines a problem in a way to provide a justification for a particular intervention.

of natural pastures, promotion of individualised property rights and markets for land or water) cannot only rely on 'received wisdom' or model calculations but needs a participatory approach to understand the context specific critical variables and their interrelationship. Such an approach allows the knowledge of local people on their natural, socio-economic and institutional environment to be taken into account.

At a national or global level the issues become even more complex. The question of how much growth - of population as well as per capita national product - is compatible with (necessary for) food security and the provision of other needs, with conservation of nature and biodiversity, with requirements for preventing adverse global climatic changes through atmospheric pollution etc. has been discussed extensively in recent years based on statistical 'facts'. The conclusions, however, with respect to (un-)sustainability of consumption patterns, modes of production or growth paths might be quite arbitrary or even misleading if the choice and specification of particular variables and their relationships, levels of aggregation (local, regional, national or global) and time horizon as well as underlying assumptions in the estimation of particular values are not properly spelled out. An example are arguments based on the so-called EHRLICH equation which relates environmental degradation to population, consumption and technology. Basically a simple identity, it is frequently quoted by environmentalists to draw attention to the components which are involved in the negative environmental trends at a macro level (EHRLICH & EHRLICH, 1990). By assuming independence of the three right hand side variables this equation has, however, little appeal to development economists whose discussions for decades have centred on the interdependence of just these variables: The pessimistic Malthusian argument of diminishing affluence caused by population growth leading Carlyle to call economics the 'dismal science' (SINGER, 1993: 27) is contradicted by the optimist views of BOSERUP (1981) and SIMON (1982) who pointed to the positive effects of population growth on innovations, technology and income under certain conditions. Leaving out these interdependencies and additional explanatory variables and given the high level of aggregation, the EHRLICH equation is of little practical use. This simplistic approach has been criticised for overemphasising particular variables and policies, such as population control in the South and restrictions on consumption and growth in the North (see e.g. BLAIKIE & BROOKFIELD, 1987; ALMARIC, 1995).

2.2 Sustainable Development

People's livelihoods, the economy and society are considered major concerns of 'Sustainable Development' shown in the middle section of the table. Basically an anthropocentrist

approach⁵, it acknowledges the necessity of focusing on people living within real economies as part of society. Ecological viability and economic efficiency are two important constraints while social efficiency and justice are central goals. The design of operational strategies for sustainable rural development requires multidisciplinary and the consideration of a wide range of theoretical approaches and disciplines reaching from agricultural sciences (agronomy, animal husbandry) on the natural sciences side of the spectrum to ethics and to anthropology and ethnology on the social sciences side. Contributions from ecologists, biologists and neo-classical economists, mainly concerned about ecological sustainability and sustainable growth respectively, are, of course, useful and necessary.

Economics will always remain a central discipline when it comes to analysing the sustainability of resource use in a rural development context. The variety of sub-disciplines considered⁶ reflect the ecological, institutional, evolutionary, and social dimensions of a context specific approach to sustainable development which mainstream economic theory is not able to accommodate properly - neither conceptually nor as a base for empirical research. Particularly the restrictive assumptions of the theoretical model such as methodological individualism, maximising behaviour, perfect and competitive markets in equilibrium, perfect information, and given distribution of property rights on resources, income and power leave the most pressing and interesting issues in the use of nature and natural resources outside of its research agenda. Particularly in a rural development context problems of resource degradation can often only be understood if individual as well as communal strategies of coping with instabilities and of adjusting to disequilibria within the natural and socio-economic environment and within the cultural, social and institutional norms of access to resources and of resource use are considered. As most environmental and resource issues are resolved in part through the reassignment of rights (NORGAARD & HOWARTH, 1992: 44), efficiency considerations have to be subject to a more general, institutional and interdisciplinary analysis of sustainable production systems and of policies for their improvement. Methods of analysis such as participatory rural appraisal (PRA), modelling of human behaviour, of agro-economic systems, of games and conflicts in the use of common property resources are considered more useful than the extremely structured methods and abstract models of mainstream economic theory such as social cost benefit analysis, programming, computable general equilibrium or growth models. The loss in rigour in formal hypothesis testing has to be recognised. It is, however, assumed to be outweighed by the gain

⁵ For FABER et al., 1995: 232 the definition of Sustainable Development in the BRUNDTLAND Report ('satisfaction of the wants of the present generation, in such a way that the satisfaction of the wants of the future generations is not impaired' 1987 :43) has the advantage of leaving open the prospect of operational concepts of economic development as nature is only considered insofar as it is required for the fulfilment of present and future human wants.

⁶ Development economics has been left out as a sub-discipline as other social sciences with 'development' as sub-disciplines would have to be treated accordingly.

in information on site and context specific features of natural and social systems by involving local people and by using mechanisms of mutual learning and feedback.

A corresponding research approach generally precludes value neutrality frequently hypothesised by mainstream economists. Value neutrality in economics, however, must be considered an illusion, as any economic theory assumes a certain set of institutions and is founded on value judgements (PAARLBERG, 1993: 826). There is no doubt that concern about sustainable livelihoods for people, about their culture and institutions as well as about equity, distribution and conflicts in the use of natural resources requires an explicit treatment of values. Assumptions about a social welfare function - an artificial construct of neo-classical welfare theory - is certainly no substitute for finding social optima based on the comparison of alternative strategies, sets of targets, distributions of benefits and costs and property rights in a particular context. Values and norms - of rural people as well as of researchers or other individuals and organisations (government and non-governmental) intervening in a particular rural setting - have therefore to be identified and made explicit when fostering or designing institutional configurations for sustainable resource use.

Experience in rural development projects with a natural resource conservation component shows that conservation or reforestation is not in the short-term interest of local populations and therefore not sustainable unless these activities are conceived in close cooperation with them, and unless short-term benefits or alternative (including off-farm) sources for a livelihood are provided within a market-led local, regional and national development process. Often social and institutional barriers keep local people or particular strata within local communities (the poor, the old, women, children) from reaping the benefits of outside interventions and measures requiring their contribution in working time and effort. Their sustained livelihoods might even be endangered under the banner of sustainability by projects hiding the interests of outsiders such as state bureaucracies, wood prospecting and processing or tourist industries, and conservationists. Thus, national or internationally funded development and resource conservation projects considered technically feasible and economically efficient and thus sustainable might not be sustainable considering their social impact and the institutional setting. The corresponding effects are difficult to assess ex-ante, rarely quantifiable and therefore not to be translated into the terms of a cost-benefit indicator. And even if they were translatable, the results and implications would not be understood neither by policy makers on different decision-making levels nor by the people concerned. As a consequence, sustainability in a rural development context means correspondence to the knowledge, perceptions, needs and interests of local populations and thus their involvement in the identification, appraisal, implementation, monitoring and evaluation of outside interventions. The entries in the table with respect to 'major advantages and flaws, concerns

with respect to quantification of sustainability, and major policy prescriptions' were selected by the author from the literature review and therefore correspond to his personal value judgements. So does his conclusion that the lack of mutually acknowledged theories and terminology ⁷and the prevailing descriptive analyses, often contradictory or biased due to multiple realities and world views, seem to be insurmountable obstacles to an agreement on an operational definition of the term 'sustainable development' and of 'environmental degradation' for that matter. Acknowledging this as a fact might, perhaps, help to come up with a realistic agenda for research and policy analysis to 'alleviate poverty, create employment and boost sustainable agricultural production and at the same time preserve the natural resource base' postulated as goals in the announcement of this symposium. Multidisciplinary and openness to new methodological approaches within one's own discipline as well as transparency in assumptions, implicit value judgements and in conflicting interests are necessary for such an agenda. In addition to being open to new approaches the rediscovery of concepts brushed aside, forgotten or substituted by overly sophisticated theoretical models might be useful. VON THÜNEN, BRINKMANN, AEREBOE and CHAYANOV are some relevant names in agricultural economics, Adam SMITH, SCHUMPETER, the 'austrian' or the 'old' institutionalists in economics, CHRISTALLER and LÖSCH in regional sciences. Their concepts seem to be quite helpful in understanding issues in the current debate on sustainability.

3. Sustainability in development aid - the role of non-governmental organisations and local government institutions

In spite of the fuzzy conceptual and evidential base haunting the literature reviewed, the terms sustainability and environmental degradation proliferate in the policy documents of local, national and international organisations concerned with ecologically sound development. 'Global' and 'institutions' are two other terms frequently used in this context: The first generally referring to the close interrelation of problems of (un-) sustainable resource use between the local, national and international spheres, the second to related organisational structures and contractual arrangements. Though equally overused and vague both terms seem to indicate a new paradigm in development aid. Introduced to the international aid community by the BRUNDTLAND report (WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, 1987), the concern about the globality of environmental and natural resource problems is particularly reflected in Agenda 21 of the

⁷ Terms with different interpretations in different disciplines and contexts are (besides 'sustainability' and 'development') e.g. 'marginality', 'rent', 'efficiency', 'peasant'. As even within economics or within the social sciences the terms have not a unique interpretation or definition, this will cause even more problems in interdisciplinary research involving natural and social sciences. This is reflected in the comparative analysis of the term 'marginal' by BLAIKIE & BROOKFIELD, 1987, which does not seem to contribute much in terms of operability.

1992 Rio Conference (United Nations Conference on Environment and Development, UNCED) and in the agendas of subsequent international conferences and agreements. The growing concern in the North about environmental degradation, about loss in biodiversity and about climatic change and particularly the widespread acknowledgement of the close relationship of these global phenomena to population growth, rural poverty, food insecurity, and low productivity levels in agriculture in the South (i.e. developing countries) has led to a new activism of international organisations, national and local governments, and NGOs under the banner of sustainability. The concerns in the North translate into new bargaining power for countries of the South in the international dialogue on development aid and trade.

Even though the role of markets and trade form a central part in international bargaining there is clear evidence of non-market institutions, in the sense of organisations as well as in the sense of formal (laws) and informal (traditional) rights and contractual arrangements, playing a central role when it comes to sharing nature and natural resources on a global, national and local level as well as coordinating and solving conflicts in resource use. The wave of recent international conferences on social and environmental issues, the increasing number of international conventions and special funds intended to eliminate or at least reduce some of the sources of environmental degradation as well as the increasing role environmental NGOs play in these international processes and on the local level are indicators for this trend. The background and motivation of northern and southern NGOs, often seeing themselves as advocates of nature, of the rights of marginalised indigenous people, and of a new ethic in development aid is reflected in the literature on sustainable development reviewed. Their role and capacities within rural development projects and for ecologically, socially, economically, and institutionally sustainable development are far from clear and need to be thoroughly analysed in a case by case approach. The remainder of this paper will give an example of an ongoing collaborative approach of environmentally oriented NGOs and official aid projects in Peru for strengthening the institutional capacity of local communities.

3.1 Peru - new opportunities and needs within the institutional reforms of the Fujimori Government

The institutional reforms of the government of president FUJIMORI (elected in 1990 and reelected in 1994) reflected in the new 1993 Constitution and in the legal specifications of the municipal law, transfers political, economic and administrative authority to plan and carry out a wide range of services and development activities to the local level. In practice, however, most local governments (province and district) up to now have not been able to use this authority and particularly have not been able to encourage a systematic, meaningful and

continuous participation of local people and their organisations for initiating a sustainable development process. There are multiple reasons for this situation, such as:

- (i) the lack of resources, particularly of funds due to a lack of own income and of transfers from central government, partly due to
- (ii) the lack of corresponding laws or the implementation of existing laws,
- (iii) the discontinuity in elected local governments (abolished in 1919, reinstated 1963-68, abolished again by the military government and only reintroduced in 1980),
- (iv) the traditional vertical, centralised decision-making structure, reinstated by President FUJIMORI himself, and
- (v) the traditionally paternalistic working style of local authorities.

Thus, in spite of a good record of participatory democracy in Peru compared to other countries and despite the existence of a variety of grassroots organisations such as water user and farmer organisations, mothers, youth or parents' clubs, socially efficient institutions for guiding individual economic activities to produce a beneficial outcome for the community and the natural environment are lacking. This deficiency also affects outside interventions aimed at improving the livelihoods of the people in a sustainable way. At the moment these are not being guided towards development priorities nor monitored and evaluated by the people concerned. This applies, for example, to projects funded by FONCODES (Fondo Nacional de Compensación y Desarrollo Social), initially an emergency fund to attenuate the impact of the structural adjustment programme of the government, but in practice a highly centralised political instrument of the FUJIMORI government.

3.2 Institutional innovations to promote sustainability of development projects in the Inka and Renom Regions

The EU-financed Inka-Renom project (Support for disadvantaged rural communities in the Renom and Inka regions) was started in February 1995 in two regions of the Peruvian Andes, the Inka Region in the south and the department of Cajamarca (Subregion IV of the Renom region) in the north. With FONCODES as the national counterpart it has the dual objective of (i) executing micro projects in support for disadvantaged rural communities and (ii) contributing to the promotion of a participatory district level planning system. As the project is limited to a period of only three years, it needs to take advantage as much as possible of the existing NGO experience and institutional capacity for supporting micro project identification, prioritising, planning, execution, monitoring and evaluation and for integrating the micro projects into a participatory regional development concept.

In the Inka region the project will be able to use the experience of the PREDES-Project (Programa de Acciones de Emergencia y Desarrollo) which had been partly funded as a pilot project by EU Member States (Germany, Spain, the Netherlands) and Switzerland to develop a decentralised organisational framework for local level planning and implementation of micro projects for FONCODES. The project ended in mid-1995 despite donor willingness to fund a second phase. The Inka-Renom project component in the Inka region will therefore be able to use and improve institutions created by PREDES: (i) the District Development Councils (Comités Distritales de Desarrollo, CDD) as central decision-making bodies, (ii) the Networks of Technical Assistance (Redes Técnicas, RT) through which government and non-governmental organisations give technical support to grassroots organisations and to the CDDs while enhancing participation, and (iii) the Roundtables (Mesas de Trabajo, MT) organised around specific topics (e.g. natural resources, environment, productive and integrated projects, health, education, women). Besides these three institutional innovations, COINCIDE (Coordinación Intercentros de Investigación, Desarrollo y Educación) might be considered a fourth one. Founded in 1989 as an association of NGOs (five in 1995), it has been involved in the conceptualisation and execution of PREDES as well as joining forces in the planning and execution of other common projects (marketing, health).

In Cajamarca, the project supports the work of the 'mesa de concertación', an institutional innovation promoted by the provincial mayor since 1993 for the coordination of programmes and projects for sustainable development at the provincial level. More than 60 private and public institutions and organisations (government agencies, private enterprises, NGOs, grassroot organisations⁸) have participated in six 'mesas temáticas' (natural resources and agricultural production; urban environment; education and culture; historical and cultural patrimony; production and employment; population, women and family) which make practical propositions and promote and coordinate development activities in these fields. The Inka-Renom project is directly involved in a new 'mesa temática' elaborating a methodology for district level planning with the objective of establishing mesas de concertación and perhaps similar institutional setups as in the Inka region on the district level. And here again, an association of NGOs (Comité Interinstitucional para el Desarrollo Regional, CIPDER) and individual NGOs are driving forces in the support of these new institutions⁹. In their projects, executed individually as well as in association with other NGOs, government and private

⁸ In Cajamarca the term 'organization' is mostly reserved for grassroots organizations, while the term 'institutions' is used for all other organizations, including NGOs, state, church.

⁹ When first founded by seven (out of more than a hundred) NGOs CIPDER listed an 'agroecological approach and the sustainable development in the ecosystems of the region', the 'strengthening of the management capacity of local governments' even before the 'integration and strengthening of their associates' as principal strategic lines of action (CIPDER, 1995: 8).

organisations (such as PRONAMACHCS, Programa Nacional de Manejo de Cuencas y Conservación de Suelos and ADEFOR, Asociación Civil para la Investigación y Desarrollo Forestal) they usually unite a strong institutional development component with an agroecological one. The latter becomes particularly evident in the choice of watersheds as the geographical unit for planning and organizing project activities, in the importance of soil conservation, organic farming and reforestation activities as well as in the generous use of the slogans 'sustainable development' and 'harmony with nature'. A recent institutional innovation to coordinate activities between NGOs, government and private development organisations on the one hand and community and grassroots organisations on the other are the so-called 'integration and development fairs' (Ferias de Integración y Desarrollo) in which offer of and demand for projects are being brought together on a district level.

3.3 Some preliminary conclusions on the role of NGOs in Cajamarca¹⁰

- Even though most NGOs employ environmentalist jargon and lack economists within their personnel they seem to be aware that economic criteria, market orientation and productive activities have to play a central role within a package of measures to enhance ecologically sound development on the local level. However, NGOs seem to have more experience in conservation than in economically sound productive projects.
- This statement is not based on a thorough analysis as projects of NGOs have not been systematically revised or visited in the field. My positive general attitude towards NGOs in this report is based on past experience, some sporadic contacts with local NGO personnel and conclusions from theoretical considerations.
- The strong position of NGOs in Cajamarca, their participation in political movements and the influence they have in local communities is a phenomenon which is difficult to understand for an outsider. Their increasing political influence, if used for the benefit of local communities, seems to be a chance for the empowerment of the latter and more involvement in determining their development paths.
- NGOs themselves, however, don't seem to be free from paternalistic approaches usually denounced by them. The project will have to keep an eye on NGOs' ability to stand back when it comes to identifying, planning and executing microprojects. It should use this criterion in the selection of NGOs for providing services and might want to include them in PRA-training workshops.

¹⁰ Excerpt from a preliminary consultancy report to the director of the Inka-Renom Project by the author.

4. Research on ecologically sound rural development - some conclusions

Dismissing the term sustainability and hinting at the importance of institutions is certainly not a sufficient answer to the question posed in the title of this paper - even though the middle column of the table might contain some features of an agenda for ecologically sound rural development. Research so far seems to indicate, that neither a narrow mainstream economic, nor a doctrinal environmentalist approach to sustainability are satisfactory in the context of rural development. An institutional economic approach is considered necessary which would require, among others, the analysis of (i) equity and property rights ('environmental entitlements') issues in the way of natural resources with conflicting claims and interests (intra-family, intra-community, as well as between local, regional, national and international levels), (ii) non-market and mixed market-non-market institutional arrangements and transactions and the valuation of corresponding costs and benefits in a comparative second-best analysis of institutional configurations, (iii) the role of information costs as part of transaction costs in decision-making and in strategic behaviour of individuals and organisations, (iv) coping strategies and livelihood systems of individuals, different categories of households, extended families, and rural communities including off-farm employment, forestry and fisheries, rural industries, temporal and permanent migration and income remittances, (v) disequilibria, seasonality, life cycles, spacial heterogeneity and disparities between social groups.

With respect to research methodology such an approach has to be (i) interdisciplinary acknowledging the specific terminologies, strengths and weaknesses of the disciplines involved, (ii) innovative and open to new approaches and methods, challenging established ('mainstream') theories and 'received wisdom', (iii) interested in values and in the significance of the research and its results for people, society and humanity, (iv) aware of underlying assumptions of methods, models and theories applied when inferring policy prescriptions from research results, (v) wary of acknowledging only the visible, quantifiable, and comprehensible as real, scientific, and relevant.

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