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> Ekonomiczne problemy wykorzystania odnawialnych zasobów przyrodniczych do produkcji energii

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PRIORITIES IN SUSTAINABLE DEVELOPMENT – A STAKEHOLDER ANALYSIS

1. Introduction

In the first part of this paper, theoretical arguments will be provided why priorities should be set in policy for sustainable development, and whether economic, environmental or social issues are likely to receive priority. In the second part preliminary research among students, foresters and civil servants in the Opole region in Poland $(N = 934)^1$ is presented in order to check the hypothesis that while socioeconomic issues are likely to receive priority over environmental issues on a global scale, locally-specific environmental problems such as water and air pollution may receive relatively high priority. This is based on the assumption that people are most interested in short-term, direct, certain and measurable costs and benefits. Following this line of reasoning, on a global scale finding solutions for environmental issues such as climate change and protection of biodiversity are likely to obtain priority over solving the problem of poverty on a global scale. As a consequence, sustainable economic development may be a condition for achieving environmental sustainability.

Such knowledge on priorities may be useful in creating policy for sustainable development. When economic issues are most important, environmental policy is likely to meet resistance from different stakeholders in society when it leads to negative economic consequences. Furthermore, when focus is on socio-economic development, a decrease in e.g. energy use may be achieved as a side effect of technological innovation. However, a danger of such an approach is that it may strengthen the demand for increased consumption by society [4], strengthening the

¹ The sample also contains 39 questionnaires from owners/managers of small and medium-sized enterprises. These questionnaires are not analysed separately as the sample of this group is rather small.

mental model that growth is good, while in modern times where human beings have mastered nature, this growth may be a fundamental reason for the ecological and environmental problems on "spaceship Earth" [2]. In this context, identification of priorities may be helpful in public discussion, which may be an effective instrument in change of mental models and ways of thinking [7; 15].

2. Which issues receive priority in sustainable development – theoretical arguments

An issue that has received relatively little attention in theory on sustainable development is priorities. As Lomborg [6] argues, although ideally we should be able to solve all social, economic and environmental problems of sustainable development, in reality priorities should be set as otherwise it is too difficult to create effective policy for sustainable development. An important question in this context is whether economic and social issues receive priorities over environmental issues, as such a situation may hamper effective environmental protection, which is considered to cost economic growth, and not the other way round. Furthermore, "[i]ssues of sustainability have grown too complex to be resolved by single parties in society and require close collaboration between all societal parties [5, p. 138]." While the complexity of the issue is an argument for the need of setting priorities, the cooperation between different stakeholders implies the potential existence of conflicts due to differing priorities. Identification of these priorities may facilitate the finding of cooperative solutions.

The most common definition of sustainable development from the so-called Bruntland report already contains the issue of priorities, as it states that it is: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of "needs", in particular the essential needs of the world's poor, to which overriding priority should be given" [16, p. 43].

As Rao [14] argues, the second part of the definition is often neglected, and inter-generational aspects related to future poverty and leaving behind a resource base seem to receive more attention than intra-generational issues (current poverty).

The hypothesis to be tested by the preliminary research presented below is that, in general, economic and social aspects of sustainable development receive priority over environmental aspects [8-12]. This is based on the assumption that people are more interested in short-term, direct, measurable and certain benefits than in long-term, indirect, more difficult to measure and uncertain benefits. In other words, self-interest is the basis for priorities in production, consumption, environmental protection, etc. [1]. Many environmental problems have difficult to measure, indirect, uncertain and long-term effects on welfare and the ecosystem [3]. Thus, it can be expected that income and employment receive high priority. Locally-specific

environmental problems (e.g., clean water, clean air) are likely to receive priority over global environmental problems (e.g., climate change, protection of biodiversity). Clean water and clean air may receive high priority, as they are necessary for human survival and provide direct utility. Poverty on a global scale is likely to receive less priority than global environmental problems, as climate change is more likely to influence the people's utility function than poverty somewhere else. Following this line of reasoning, priorities may differ among different stakeholders depending on their profession and experience. Thus, in the research presented, it may be expected that foresters are more interested in environmental issues, as they work with the environment on a day-to-day basis, while students of economics are more likely to be interested in economic issues. Of course, the categories are general, and in reality priorities may change depending on the specific subject, or whether there is an information campaign on a certain subject, like famines in Africa. However, the hypotheses should be interpreted as long-term tendencies in priorities. When self-interest is the basis for priorities, then policy for sustainable development should try to achieve a situation where people are aware and convinced of the importance of eco-system survival and solving problems of poverty for the survival of mankind, while appreciating more long-term, less measurable and more indirect costs and benefits of human production and consumption behaviour. In the short-term, environmental problems may be solved by creating incentives based on short-time horizons. However, such policy may strengthen the short--terminism of decision-making, and create a problem in the perspective of a longer period of time.

3. Questionnaire research on stakeholder priorities in the Opole region – preliminary results

In 2007, questionnaire research (N = 934) on priorities in sustainable development was carried out in the Opole region among foresters (N = 389, non-response below 22%), civil servants from the Marshall's office (N = 255, non-response about 48%), students studying at Opole University (N = 251, mainly economists) and owners/managers from small and medium sized enterprises (N = 39).

The first question concerned the meaning of the concept of sustainable development (Table 1). Almost 46% of the sample indicates the "traditional" (no. 5) definition in accordance with the definition from the "Bruntland Report" [16, p. 8]. This may be related to the fact that students know about the issue from courses, while foresters and civil servants may be familiar with the issue from different documents and trainings. Almost 25% identifies a definition related to economic growth or development (nos. 3 and 7), 10.4% to environmental issues (1 and 2) and 11.2% to social issues (no. 4). These results provide some arguments for the hypothesis that economic issues receive the highest priority in sustainable development.

No.	Meaning of sustainable development	Total	(N=934)
1	Producing more without deterioration of the environment	84	(9.0%)
2	Environmental protection	13	(1.4%)
3	Achieving balanced and continuous economic growth	172	(18.4%)
4	Achieving economic growth which can be used to relieve poverty and solve problems of unemployment	105	(11.2%)
5	Leaving similar possibilities for development for future generations, while assuring a good life for ourself and fellow human beings, not negatively influencing the state of the environment	429	(45.9%)
6	Increasing the quality of life	18	(1.9%)
7	Stable economic development	56	(6.0%)
8	I don't know	13	(1.4%)
9	No answer	10	(1.1%)
10	More definitions given	34	(3.6%)

Table 1. The meaning of the concept of sustainable development (only one answer)

Source: author's own research.

While 10.4% of the whole sample identifies the environmentally related definitions of sustainable development (nos. 1 and 2), the percentage is 3.2 for students, 7.9 for civil servants and 16.5 for foresters. This provides some evidence for the hypothesis that the direct environment influences priorities, as foresters' work and income is directly related to the natural environment. While 24.4% of the whole sample gives economically-related definitions (nos. 3 and 7), this percentage is 29.5 for students, 23.5 for civil servants and 21.6 for foresters.

Another question concerned the perceived importance of different social, economic and environmental issues (Tables 2 and 3), where respondents could assess the importance on a scale from 0 (completely unimportant) to 10 (extremely important). the majority assessed all issues to be extremely important, except for aid to developing countries, which received the lowest priority among all stakeholders. locally-specific environmental issues (clean water, clean air), work and an increase in personal income received quite similar priority. this confirms the hypothesis that what touches people most directly is likely to receive the highest priority.

When analysing the averages for the different stakeholders, it can be observed that clean air and water as well as solving the problem of climate change and protecting biodiversity receive the highest priority among foresters. An increase in personal income is more important for foresters and civil servants, work receives similar priorities among all three groups, while fighting unemployment is most important for students. This provides some evidence for the hypothesis that direct environment influences priorities. For example, unemployment may be of more importance for students, as they still have to find a job after finishing their studies. Access to information, an important element of public participation in creating policy for sustainable development, may be more relevant to students as finding and processing information is an important element of studying. Environmental issues receive least priority among students. This may be related to the profile of their studies (economics and mathematics), while civil servants may have to deal with these issues as a result of policy documents exist emphasising the importance of such issues in regional development, while, as mentioned, foresters work on a daily basis with the environment.

Issue	Students $(N = 251)$		Civil servants $(N = 255)$		Foresters $(N = 389)$	
	median	mode	median	mode	median	mode
Clean air	9	10	10	10	10	10
Clean water	9	10	10	10	10	10
Increase in personal income	9	10	10	10	10	10
Work	9	10	9	10	10	10
Leisure time	9	10	9	10	10	10
Fighting unemployment	9	10	10	10	10	10
Fighting poverty	8	8	9	10	10	10
Assuring access to information	9	10	9	10	9	10
Stimulating economic growth	8	8	9	10	8	10
Solving the problem of climate change	7	8	8	10	9	10
Disappearance of biodiversity	7	7	8	10	9	10
Aid to developing countries	7	7	6	5	5	5

Table 2. Some economic, social and environmental priorities of students, civil servants and foresters in the Opole region (median and mode)

0 (extremely unimportant) – 10 (extremely important).

Source: author's own research.

Table 3. Some economic, social and environmental priorities - a comparison of stakeholders (mean)

Issue	Students $(N = 251)$	Civil servants $(N = 255)$	Foresters $(N = 389)$
Clean air	8.52	8.92	9.28
Clean water	8.42	8.88	9.25
Increase in personal income	8.60	9.05	8.98
Work	8.75	8.85	8.80
Leisure time	8.55	8.73	8.57
Fighting unemployment	8.89	8.23	8.46
Fighting poverty	8.15	8.29	8.65
Assuring access to information	8.53	8.17	8.13
Stimulating economic growth	7.97	8.34	8.21
Solving the problem of climate change	6.98	7.66	8.20
Disappearance of biodiversity	6.19	7.30	8.16
Aid to developing countries	6.74	5.99	5.73

N = 934.

0 (extremely unimportant) – 10 (extremely important).

Source: author's own research.

Although the issue requires more detailed analysis, and will have to be compared with questionnaire research among other groups of stakeholders, there is evidence for the general hypothesis that socio-economic issues receive priority over environmental issues, while locally-specific environmental problems may receive high priority. Although global environmental problems receive less priority, these issues are still more important than the issue of poverty on a global scale.

Respondents were asked to indicate whether they (completely) agree, (completely) disagree or neither agree nor disagree with different statements (Table 4). The majority of the respondents either agree or completely agree with the statement that economic growth solves the problem of poverty and unemployment, a similar amount of respondents is dissatisfied with their income, while more than 70% thinks modern science is likely to solve our environmental problems. The implication of this is that people are likely to support policy for economic growth, aspire for an increase in consumption (reflected by an increase in income), and may not be willing to sacrifice something (e.g. not willing to lower energy consumption) for environmental protection as science is thought to find a solution for these problems. However, the issue of economic growth itself is not necessarily more important than solving environmental problems or the problem of unemployment, and unemployment not necessarily more important than environmental issues. An explanation may be that economic growth as a general category may be considered to be less important for individual utility than issues of unemployment (threatening direct income loss) and environmental problems influencing more directly the quality of life. These results show that it may be difficult to compare general categories, and priorities should be compared on a case-to-case basis. More than half of the respondents consider poverty in Poland to be more important than poverty in Africa, where many people live in extremely miserable circumstances, confirming earlier results.

Statement	(Completely) disagree	Neutral position	(Completely) agree
Economic growth solves problems of poverty and unemployment	20.6	25.8	53.7
Modern science can be relied on to solve our environmental problems	6.7	20.6	72.7
I am satisfied with the level of the income I and my household			
members obtain	53.2	27.0	19.9
Economic growth is more important than solving			
environmental problems	56.9	29.3	13.8
Economic growth is more important than solving the problem			
of unemployment	48.1	34.1	17.8
Solving the problem of unemployment is more important			
than solving environmental problems	42.6	33.9	23.5
It is more important to solve the problem of poverty			
in our country than in the poor African countries	19.5	26.0	54.6

Table 4. Statements on importance of different issues - agreement/disagreement (in %)

Source: author's own research, some questions adapted from http://ess.nsd.uid.no.

4. Concluding remarks

The preliminary results of the questionnaire research provide evidence for the hypothesis that what touches people more directly and is easier to measure is more important to them. Socio-economic issues such as income and employment seem to receive priority over environmental issues. However, this depends on the type of environmental problems, as locally-specific problems, often directly influencing the individual's quality of life, receive priority over global environmental problems. The importance of locally-specific environmental problems may also depend on whether someone is employed. Foresters and civil servants, being employed, rank clean water and clean air higher than students, who seem to give more importance to employment issues. Global poverty receives least priority, and in such a case developing countries are less likely to try to do something to solve this problem.

Results indicate that while socio-economic development in the own region/nation may be the basis for environmental sustainability, this is not necessarily the case for environmental issues on a global scale. Global environmental issues may be more important than issues of global poverty, as they are more likely to threaten local and national socio-economic stability. Thus, for example, when changes in agricultural policies in highly developed countries of the European Union or the USA take place in order to support the production of bio-fuel and reduce CO_2 emissions, this may take place even at the expense of an increase in the price of food on the world market, hurting the very poor in less developed countries the most. This may be a result of lack of interest in the problems of the poor [13], but may also be explained by the belief that markets, economic growth and technological advance will solve all problems. When growth and technology turn out not to be a panacea, either the problems will remain or even become larger, or the way of thinking should be changed in order to achieve sustainable development.

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PRIORYTETY ZRÓWNOWAŻONEGO ROZWOJU – ANALIZA INTERESARIUSZY

Streszczenie

W niniejszym artykule przedstawione zostały teoretyczne argumenty przemawiające za hipotezą, zgodnie z którą kwestie społeczno-gospodarcze przeważnie zyskują wyższy priorytet aniżeli globalne problemy związane z ochroną środowiska. Problemy specyficzne w skali lokalnej zwykle mają wysoki priorytet, podczas gdy globalne kwestie ekologiczne są uznawane za ważniejsze niż problem globalnego ubóstwa. Wydaje się, że badania empiryczne przeprowadzone wśród studentów, leśniczych oraz urzędników państwowych w regionie Opola (N = 934) potwierdzają powyższą hipotezę.