

**A Report, and some Reflections, on the Biennial Meeting of the
Russian Society for Ecological Economics, (RSEE)
Lake Baikal, Siberia, Russia, 18-23 August, 2003.¹**

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This conference, held on the shores of Lake Baikal, while ostensibly about economic development and environment, could not escape its context, the de-development of Siberia. The effects, one may rightly speculate, caused by the structural disintegration of socio-economic institutional framework of the former Soviet System -visibly observed as ‘chaos’, (i.e., a measurable rate of increase in ‘entropy production’). The recurring theme of the conference was the apparent paradox of an increase in the rate of productivity coupled with an decrease in the rate of per capita income. Many discussants were puzzled by the question; why should the average persons income fall when an efficient, decentralized, self-regulating, market economy replaces an obviously inefficient, over-capitalized, centrally planned economy?² Was this a paradox of wealth, (land, water, mineral, forests etc.), midst the land of impoverished folk? Conventional economics would say: that this is merely a temporary, *albeit* unanticipated, working of the real paradox of the ‘invisible hand. In time, everyone working towards there own selfish interests, will benefit the good of the whole community -be patient! Ecological Economics would say: that this is not a paradox, on the contrary, an expected ‘state condition’ of the dynamics of a complex interactive system where the de-development of Siberia is but an ‘emergent property of a dissipative structure’?

What, then, happened then to Siberia’s ‘economic surplus’? Did this dissipate in the informal and/or illegal economy? Those of us who came from outside Russia were impressed by the vast, beautiful, landscape of Siberia and equally struck by disorder, and impoverishment, in particular, of the rural population. There were many signs of an informal economy typified by roadside markets of homegrown tomatoes, potatoes or wild berries and mushrooms sold for a handful of rubles. Yet, the statistics tell us of the billions of rubles generated from extracting the ‘natural wealth’ of Siberia, which, for the most part, appears to have evaporated into the global ‘export’ market.

Ryumina,³ (Institute of Market Problems, Moscow) pointed to the incapacity (or the lack of political will) in Russia to implement ‘user cost’ rent for natural capital, a necessary requirement to underpin sustainable conservation and income policy for the ‘local’ resource communities. Ryumina raised the question, is the this a market failure? or a manifestation of dysfunctional social dynamics of economies-in-transition? The cause of which could be, for instance, when the rate of institutional breakdown of the old economy > rate institutional build-up of the new economy.

Well-documented are market failures of the Russian economy-in-transition, among which are free-for-all opportunism, insufficiency of financial control and audits of private enterprise, the inexperience of government institutions to monitor business behaviour and enforce financial, social and environmental regulations, and above all, the almost complete absence of a well-established business ethics with normative rules of ‘fairness’ in competition, consumer protection, and public scrutiny of registered property ownership and transfer contracts. Ryumina

also pointed to the difficulty of analyzing ‘market behaviour’ in Russia, in particular how does one distinguish what might be considered legitimate ‘profits’ in competitive society and, with little exaggeration, might be considered out-right theft. In this context, Siberia may be experiencing one of the greatest ‘resource theft’ in the annals of mankind!

Peter Söderbaum,⁴ (Mälardalen University, Sweden), in his opening address, raised the pertinent question on whether a ‘theory’ of optimization for an individual utility function has relevance for the *sine non qua* of ‘collective utility’ for sustainable production-consumption systems.⁵ It would be unreasonable, Söderbaum mused, to expect an SD policy to fly when burdened with the excess baggage of neoclassical ideology. Nonetheless, latter’s science, paradigms, and ideology, has successfully infiltrated the ‘ecological modernization’ project allowing business to feel good about long-term ‘sustainability’ as being merely a matter of implementing the appropriate environmental management systems, such as ISO 14000. While policies, like polluter-pays-principle, appear to mitigate the worst features of ‘externalities,’ it does little, if anything, to change the social-political-institutional value structure considered necessary to realize SD.

The neoclassical ideology, in his view, has infected the world economic organizations -the OECD, the IMF, the WB, and WTO, and thus, despite the SD rhetoric, global ‘ecological modernization’ project will ultimately fail in its object to turn an unsustainable, to a sustainable, mass-consumer culture. The WTO, the mid-wife of globalization, plays a particularly insidious role of propagating a false hope of a better world through trade, but defacto, exacerbates the North-South social-cultural divide. Söderbaum proposed that WTO be transformed into a World Culture and Environmental Organization (WCEO). The purpose of ‘free trade’ in the redefined mandate is to improve the broader welfare-cultural objectives of a society, and not, as is currently the case, to generate a higher per capita income. Söderbaum suggested that “With a few exception, the present staff has to be replaced.”⁶

My paper,⁷ while a critique of the neoclassical underpinning of the ‘Handbook’ of the UN System of Environmental and Economic Accounting, (SEEA), proposed an ecological economics approach to ‘conservation accounting.’ The essence of which is to determine, in accounting prices, the decision-points for conservation, [i.e., (marginal) ecosystem value _ economic value]. However, in order to produce the relevant ecosystem-economy transaction accounts, one must first determine a schedule (i.e., I/O matrix) for the structural values of well-defined ecosystem production functions. Here, I proposed a method, based on a Sraffa-Leontief Circulating Capital Model, to create the accounting values in the currency of the ecosystem, called ecoprices. This I called the Sraffa Valuation Method, SVM, in contrast to the subjective ‘preference approach’ or ‘willingness-to-pay’ of the Contingency Valuation Method, CVM.

John Proops, in his address to the conference, similarly alluded to the deep commitment of EE to develop well-formulated alternative methods of empirical analysis, that must, ultimately, be more compelling, than those offered by the neoclassical school. He noted that EE methods have met some success in European Union, in particular in the emerging field of ‘Green Accounting.’⁸ The result is a clear recognition, in Brussels, of the necessity to maintain the ‘economic product’ within ‘critical balances’ determined by ecological and material-energy stock-flow accounts. He expected this influence to grow as the Society refines the theory and models for the structural framework of stock/flow natural capital accounting. However, the greatest asset of ISEE is

compatibility of the conservation values, primarily ecological and cultural, with the growing concern of community self-organization and control of local natural and human resources - generalized by the media as the anti-globalization movement.

Several papers were concerned with social, economic and environmental sustainability of Russia's new economy. Bobylev,⁹ (Moscow State University) identified factors that contribute to a much higher environmental damage and inefficient resource use, than that experienced in 'Western Economies.' While the root of the problem can be blamed on the left-over baggage of the former Soviet economy, where priority was given to time-efficient material thruputs, the attitude has persisted, and to some extent exacerbated, by the collapse of the industrial output (50% decline) and the decaying social and distributional infrastructure. However, the political decision-makers were also irresponsible in allowing the 'opportunism' of the market-economy to drive ahead of the capacity of the institutional-legal framework to control the anti-social, anti-environmental, behaviour of the new 'entrepreneurs.' This free-for-all resulted in a drastic redistribution of wealth from public to private hands without a mitigating fiscal policies to protect, (and maintain), the stock of public goods -education, health and rural-urban infrastructures. The environment and natural resources were similarly exposed to unscrupulous exploitation without the restraining influence of public opinion, environmental NGOs, and legal sanctions of the courts.

Many of the papers attempted to analyse the economic decline (per capita incomes are approaching those of developing world) in terms of the co-existence of two economies, the old economy, primarily the public sector employment, but include the privatized, (still surviving) ex-socialist industry as well as the vast rural agricultural economy, and the new economy. While the latter is decaying and under financed, the former is generating 'new wealth,' in producing 'consumer goods,' and 'services.'¹⁰ However, as with the paradox mentioned earlier, the wealth generated by the transfer of accumulated capital stocks, both manmade and natural, from 'common property' to 'private property' did not materialize into an equivalent flow of money into the public purse. On the contrary, it merely increased the income gap between the actors old and the actors of the new economy.¹¹

Several case studies contrasted well-intentioned objective functions of environmental management and nature conservation policies with the reality on the ground. Mikhailova,¹² (Kamchatka Branch of the Pacific Institute of Geography) analysed the impact on indigenous people of a major multi-national mining operation located on a biodiversity reserve in the remote Kamchatka Peninsula. This was a familiar case where the lure of the economic benefits overruled the biodiversity policy and indigenous people's hunting and fishing rights. The argument made was for the harmonious co-existence of the mine and the specified 'objects' of policy. It was argued that sensitive environmental engineering would reduce the impact of the day-to-day operations to a level sufficient to protect the fragile ecology. And, in the long-run, a promise to rehabilitate of the mine site to its original state!

The case study shows how the intrusion of a modern mining operation in a pristine ecology, inhabited by indigenous hunter-fisher peoples, has complex, unpredictable, cultural and wildlife effect that has no 'technical solution.' This case study also points to the dilemma of the conservationists, who despite the support of enlightened policy and even international

agreements on biodiversity, lose out against technical solutions -particularly if presented as a 'win-win' situation of saving the environment and offering, at the same time, higher (money) incomes to the local population and additional tax revenue for the financially-stretched local governments.

Several papers also addressed the the difficult question of valuation and quantitative methods.¹³ By and large, the focus of these papers was the development of SD indicators. While some employed the distinctly EE perspective of ecological valuation, like the ecological footprint, others used neoclassical methods, like Hedonic prices, cost/benefit analysis and contingent valuation. The empirical results show, in general, that growth in the Russian regional economies, since the collapse of the Soviet System, is resource-based and export driven. This conclusion can also be interpreted as a retrogression towards 'high entropy' production processes -with the new growth of 'low entropy' production, the financial-service economy, taking place largely outside the region, primarily in Moscow-St Petersburg axis.

Thus, in the guise of financial capital allocation as well as the takeover of the failed Soviet enterprises by multi-national corporations, centralised economic decision-making appears to have returned with a vengeance. The pattern of the new economy took a decisive turn with the (central) decision to devalue ruble, (1998). While this stemmed the hemorrhage of the (Soviet) regional economies, by stimulating world demand for Siberia's natural resource products, the decision for local development were once again made in Moscow, if not London, New York and Tokyo. Devaluation also stimulating the home-produced consumer goods industry located, primarily, in Western Russia, thus taking the double dividend of 'trade' with Siberia and the commissions on services, (see footnote 10).

Presenters of these papers noted the difficulty of producing adjusted regional GDP, as is done in green accounting, of sustainable income due to the lack of the relevant statistics, and appropriate models.¹⁴ Siberia's ecosystem reproductive capacity of vast steppes, taiga forests, tundra, arctic, mountain and coastal ecologies, is severely retrained by its climate extremes. While vast, they are also fragile, and thus vulnerable to human stressors. On the other hand, analysis of exhaustible resources (i.e., remaining years left, given the rate depletion and proven reserves) is possible with the well-documented, and accessible, data on proven mineral and fossil fuel reserves. Employing standard discounted present-value modeling, the sustainable income can be calculated given World commodity prices.

The paper by Filatova,¹⁵ (Chita State University) demonstrated ecological footprint (EP) measure for the Chita Region. This showed the while productive lands had hardly changed over a three year period (1998-2000), when adjusted for the export of EP (i.e., timber exports which quadrupled in the same period, from 156k m³ to 739k m³), the (gross) EP increased by almost one third, {3.8 global hectare area (gha) to 5.2 gha} . Results confirmed by Glazyrina's,¹⁶ (Transbaikal Centre for Ecological Economics, Chita) study of the relationship of economic growth and degradation of natural capital.

The lack of a strong EE perspective in the papers on quantitative analysis was noted by the international contingent at the conference. In my view this reflects a particular quirk of the Russia experience, and may be attributed, in part, to the uncritical rejection of Marxism coupled

with an over-enthusiastic employment of the neoclassical ‘environmental economics’ analytical tools. While these tools are useful to explore the ‘externalities’ of complex self-regulating markets, the self-correcting use of economic instruments, and willingness-to-pay for conservation, they miss the central point of sustainability, that of limits to economic growth. These studies, if they are to have a deeper insight into the dynamics of entropic processes, must go beyond the ‘linear fix’ of environment-economy imbalances, such as methods embedded in market analysis, preference functions and shadow pricing and so forth. Critical in the analysis is the ‘method of distribution’ of the ‘unevenly located and unevenly appropriated’ ecosystem surplus (stock of low entropy) and its inverse, ‘entropy production.’¹⁷ Marx’s discourse on the organic nature of capital, in this respect, has a far deeper insight into the dynamics of ‘distribution,’ *albeit* economic, than the neoclassical ‘self-referencing’ linear construct of the ‘general equilibrium,’ (i.e., optimum allocation of scarce resources). Georgescu-Roegen’s dialectics provides the relevant foundation ‘text’ on methods of quantitative analysis of entropy production -the key indicator of SD.

While it is understandable that, *albeit* very small, EE community in Russia has enthusiastically adopted the neoclassical methods, the lack of engagement with international discourse, and debate, on the science and axiomatics of EE, may, in part, be also a problem. The difference between EE and the neoclassical discourse was barely recognized in the macro-level analysis. A confusion, unfortunately, which prevails the whole ISEE community, particularly as many members view EE as an ecological extension of the neoclassical framework, (i.e., environmental economics + ecology).¹⁸

One of the most lively sessions dealt with the responsibility of RSEE in the education in Russia’s rapidly changing world of academia. Indeed, it was pointed out that while the concepts of ‘nature use’ still prevail in decision-making bodies -like departments of agriculture, forestry and mining, the new concepts of ‘sustainability’ are beginning to resonate in the popular language, and is now widely discussed in newspaper articles. Responsibility, it was further suggested, must integrate the problematic SD with the increasing popular demand for ‘greening’ of industry, of cities, and of individual household behaviour -recycling of waste.¹⁹

Wiehn,²⁰ (Universität, Kontanz) focused on the responsibility of universities to educate the ‘elite’ not only about environmental knowledge but, more importantly, inculcate a sense of environmental ethics in decision-making. The argument, in essence, is that all disciplines, professions, business and politicians, need to go beyond the rhetoric, and integrate their personal values with a shared responsibility to conserve the Earth’s commons for the future of humanity and all living species. Wiehn further suggested the principles of ‘science of conservation’ and personal ethical integration are well-articulated in EE framework. The discussion resulted in a consensus view of the privileged position of RSEE not only to develop the educational programme, but contribute, like ESEE, to the development of SD policy.

In summing-up the proceeding of the conference, Irina Glazyrina, noted the contribution of papers, in particular those with a regional focus, advances the objectives of EE in general and, in particular, strengthens the institutional base of RSEE. Following the tradition of the five preceding international meetings of RSEE, these contributions do make inroads, bit by bit, into the thinking of what it means to construct a sustainable economy for Russia. It was noted,

referring to Söderbaum presentation, that Russia, like the rest-of-the-world, is caught in the stranglehold of the neoclassical ideology embedded in the policies and programmes of the global institutions. Thus, the EE influence in Moscow is limited, but the case study papers did show that at local and regional levels of decision-making, EE may take hold, while not in Moscow, at least in the provincial capitals. The concept of the community self-management of natural resources may be seen as a seed upon which EE grows, in time, from local to global.

It was also announced that next international RSEE meeting will be hosted by St. Petersburg State University, at St. Petersburg, 2005.

End Notes

The theme of the conference: Economic Development and the Environment: Information, Modeling, and Management, (Chair: Irina Glazyrina).

² The Soviet System, despite the incapacity to produce a decent pair of shoes, was nonetheless underpinned by the moral principle of socio-economic equity.

³ “Environmental Costs, Optimization of Structure.”

⁴ “Environmental Policy integration in a regional context.”

⁵ Note difference between Ecological Economics and the Neoclassical concept of ‘sustainability.’ While for the latter ‘sustainability,’ in essence, is an ‘accidental condition’ of a general equilibrium state achievable, if, and only if, prices reflect all future sustainable states of the system. The former, on the other hand, assumes inequalities as the normal state condition of any well-defined (economic) supply-demand function, and thus the policy objective of ‘sustainability’ can be reduced to a given choice of a socially acceptable rate of ‘entropy production.’ (Mayumi, 2001, *The Origins of Ecological Economics: The Bioeconomics of Georgescu-Roegen*, London-New York, Routledge). This is compatible with Söderbaum’s position of the paramountcy of (collective) social-cultural choice over optimization functions of individual utility curves.

⁶ The argument for the removal of tariffs is based on a single-value criteria of ‘comparative advantage’ and assumes a mutual benefit in the form of higher-income for both parties, (i.e., most efficient allocation of scarce resources). An exception is made for the imposition of temporary tariffs to protect infant industry from international competition. EE applies a plural-value method to ‘free trade’ which discounts the economic benefit with environmental and cultural costs. While the latter clearly has a political dimension, the former accounts for the ‘undervalued’ exports of ecological goods and services. Söderbaum’s proposal for WTO is compatible with the EE position.

⁷ The original title “Proposal for a very practical Accounting of Ecosystem Production Functions, (EPFs) and a System of Ecology-Economy Transaction Accounts,” was changed to. “The Application of Ecological Economics to SEEA, ‘Entropy Production’ & Ecosystem-Economy Transaction Accounts,” for the presentation at the Baikal Conference.

⁸ The European Commission DG-XII funded the project ‘Environmental Valuation in Europe (EVE).’ This produced a series of Policy Research Briefs written by members of European Society of Ecological Economics, (ESEE). The Series edited by Clive Splash and Claudia Carter (Cambridge Research for the Environment) and is available from the European Commission, DG-XII, Brussels, Belgium.

⁹ “Forming of Industrial Tendencies of Development in Russia.”

¹⁰ The message of consumerism, the big distraction of the failed transition-economy, is presented by overblown advertising, ubiquitous on TV, outdoor posters and in the print media. While the phenomena of advertising ‘works’ in the high (money) income economies, does it work in low-income Russia? One cynical comment suggested that after ten years of the promise of ‘enrichissement’ the average Russian hardly distinguishing, except perhaps for its improved graphics and glamorous models, this form of advertising from propaganda posters of the Soviet era. Which, over many years, they had only become immune but reduced to a well-told ‘joke!’

¹¹ The neoclassical argument would say that the transfer of wealth producing assets from public to private decision-makers, given market prices, would result in a more efficient, and in the case of a perfect market, optimum, allocation of scarce resources -ipso facto, everyone would be better-off!

¹² “Biodiversity Conservation in Northern Endogenous People Lands.”

¹³ Examples of these papers include: Voinov, A. (Gund Institute for Ecological Economics, USA), “Application of Landscape Optimization Technique to Define Restoration Priorities and Ecosystem Value,” Polomé, P., van der Veen, A., Geurts, P., (Twente University, Netherlands), “Contingent Valuation of a Restored Coastal Natural Area,” Dvoretzkiy, L.M. (School of Economics, State University, Moscow).” Economic Valuation of Ecological Factors by Sociological Methods), Sanzheev, E.D., (Baikal Institute of Nature Use, Ulan Ude), “The Evaluation of the Indirect Use of Biological Resources for Tunkinsky National Park.” Alaeva, T.N. (Baikal Institute of Nature Use, Ulan Ude), “The Evaluation of Private and Public Benefit/Costs from the Implementation of Environmental Protection Measures.”

¹⁴ There is no escaping however the lack of the relevant statistics for the ‘ecological approach’ for economic analysis in Russia, exacerbated, perhaps, by the change from the Material Product Accounting System of centrally planned economies to the SNA of market economies. Ironically, due to the demand for sustainable accounting, the SEEA Project has introduced material flow accounting as the necessary ‘physical’ component of the SNA. Indeed, with the construction of the Russian SEEA the statistical base for EE analysis will greatly improve.

¹⁵ “Accounting of the Indicator of SD for Chita Region by the Ecological Footprint Concept.”

¹⁶ “Quality of Growth Indicators in the Context of Sustainability”

¹⁷ Mayumi (2001) formal exploration of this this question can be found in *The Origins of Ecological Economics: The Bioeconomics of Georgescu-Roegen*, London-New York, Routledge.

¹⁸ The organizing committee of ISEE2004 plan a special session on the Russian experience. This would provide an opportunity to open the discourse on ‘quantitative methods’ as a special case of economies-in-transition.

¹⁹ Liesegang (University of Heidelberg) presented a paper on the change of industry in its adaptation to the new standards of responsibility for the use of environmental goods and services entitled: *Greening of Industry: Are there ways to Solve this Herculean Task?* Here, he demonstrated the partnership of local communities and industry in Germany to produce acceptable plans for the integration waste-recycling.

²⁰ “The duty of universities to provide environmental knowledge and responsibility awareness and carefulness.”