

NEW ROLES FOR GOVERNMENT

Green Jobs

Public Service Employment and Environmental Sustainability

Mathew Forstater

Why not a Green Jobs Corps? There are obstacles, and the plan presented by this economist is controversial. But given the price paid in environmental degradation under current policies, we may have to start thinking, as they say, outside the box.

ONE REASON the unemployment problem requires creative policy thinking is the way in which employment interacts with other national and global concerns, such as the natural environment. The ongoing “jobs *versus* the environment” mindset needs to be replaced with a “jobs *and* the environment” attitude, but such an approach presents challenges in framing and limiting the range of potential solutions. As the recent Kyoto Protocol and ongoing discussions make clear, economics can trump the environment, at least in the short term. What we need now are some serious proposals that address the complex and interrelated issues regarding sustainable economic prosperity.

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For the past eight years, a number of colleagues and I have been involved in a project promoting a public service employment (PSE) policy with the potential to address not only the problem of unemployment, but also environmental sustainability and overall job quality (Forstater 1998, 1999a, 2000, 2001, 2002, 2003, 2004a, 2005). My purpose here is to introduce our proposal and provide references that elaborate various aspects of it more fully. The hope is to inspire greater discussion, debate, and research among supporters of full employment and ecological sustainability.

Green Jobs: Challenges and Prospects

There is now significant evidence that environmental regulation does not result in loss of jobs and that protecting the environment has actually generated employment (Ackerman 1997; Bezdek 1995; Goodstein 1999; Hall 1994; Morgenstern et al. 2000; Renner 1991; Templet 1996). Most of the studies demonstrate that no net reduction in employment has resulted from environmental policies. Many of them show a small but often significant net job creation associated with going green. Some identify considerable employment-generating impacts from sustainable development.

Nevertheless, some of the leading researchers refuting the myth of the job-environment trade-off express caution about the Green Jobs approach. Eban Goodstein makes clear his view that “Green jobs . . . cannot solve major problems of unemployment” (1999, 2): “If the argument is that green jobs will solve the problem of cyclical unemployment, then it is without substance” (ibid., 7). He concludes that “Green production is . . . no panacea for” recessions, but it could be an “important tool for promoting . . . development” (ibid., 8).

Focusing specifically on recycling, Frank Ackerman, another leading environmental economist, states, “There is a crucial limitation . . . to the power of recycling to boost employment” (1997, 81). The Ackerman-Goodstein argument in a nutshell is that for green production or green services to be job creating, they must be “cost competitive” with alternatives (recycling versus disposal), because if the former costs

more than the latter, "the increased cost will probably be paid, one way or another, by the households in the community. They will therefore have to reduce consumption of something else" (Goodstein 1999, 118). This is a crucial assumption, and it is also why most green jobs proposals include a policy mix of environmental regulation, eco-tax reform, public spending, and appropriate technology (see, e.g., Jacobs 1996).

Another important caution concerning the Green Jobs approach has been expressed by Bezdek (1995). He points out that while "joblessness disproportionately affects the poor, minorities, and the disadvantaged . . . the lucrative, attractive jobs [resulting from environmental protection] will largely flow to persons who are neither poor nor minorities," who "will be disproportionately concentrated in the less desirable, relatively low-paying, more dangerous jobs" (1995, 105). In addition, he argues that if there are self-imposed fiscal restraints on spending, "pressures will mount to compete environmental programs against equity-type programs on a zero-sum basis," which will also disproportionately affect the poor and disadvantaged (*ibid.*).

The point must be acknowledged that we have two analytically separable sets of problems: economic and environmental. Unregulated or poorly regulated capitalism is both macroeconomically unsatisfactory and environmentally unsustainable. The key issues on the macroeconomic side are the problems of involuntary unemployment, poverty, and inequality. Involuntary unemployment can result from deficiencies in aggregate demand, as well as from structural and technological change. On the environmental side, the economy must satisfy certain "sustainability rules" regarding depletion rates of nonrenewable and stock-renewable resource and the quantity and quality of emissions in relation to local and global assimilative capacities, and it must address issues such as biodiversity loss, soil erosion, and deforestation (Callenbach 1999; Forstater 2004b; Holmberg et al. 1996; Lawn 2001; Prugh et al., 2000). An additional challenge stems from the fact that even effective conventional policy approaches to both unemployment and ecological destruction are likely to exacerbate the problems. Full employment and environmental sustainability within conventional frameworks seem to be incompatible goals.

Even if Keynesian demand management achieved full employment, it would be environmentally destructive. There are considerable obstacles to producing “green” products, using cleaner technologies, and developing and implementing alternative energy sources because competition compels firms to base their decisions on minimizing private costs. Absent a comprehensive environmental program, expanding the private sector by Keynesian stimulus measures will ensure increased use of nonrenewable resources, more pollution, and the manufacture of products with short life cycles that harm the environment. Pumping up the private sector does not address the issues regarding the composition of output and the technological structure of production that are crucial for sustainability (Mitchell 2000, 113n8).

A comprehensive program promoting environmental sustainability has to address the technological structure of production and the composition of production and consumption. The initiative will be disruptive, as there will be winners and losers—products, occupations, skills, technologies, firms, and industries may become obsolete and be replaced by more competitive counterparts in a dynamic setting. The structural and technological transformations will shape and in some ways accelerate structural change, which is already a significant challenge in the absence of major environmental policy programs. Furthermore, the absence of an effective full-employment program during the initiative will likely exacerbate the unemployment problems of capitalist economies.

The approach to unemployment needs to both address the effective demand and structural change problems and be compatible with environmental sustainability. Furthermore, Keynesian analysis does not recognize the *functionality* of unemployment and excess capacity in capitalist economies. Firms plan reserve capacity in order to respond to market changes, which leads to excess capacity at the industry level and in the economy as a whole. Labor reserves are created in the course of capital accumulation, so unemployment suppresses wages, disciplines workers, and provides firms with a pool of workers when the economy expands. The question is whether *flexible, sustainable full employment* is possible. I believe that a PSE program can be designed

to promote flexibility and sustainability and to serve as a vehicle for social policies that also improve the workplace. In other words, a properly designed Green Jobs program can contribute substantially to achieving the dual goals of full employment and environmental sustainability.

The Public Service Employment Program

The PSE program that I propose has been referred to as an “employer of last resort” or “job guarantee” government program (Mitchell 2000; Wray 1998). The federal government would offer a PSE job to anyone ready and willing to work for a basic PSE wage-benefits package. Program expenditures would be permitted to increase the size of the federal government’s budget deficit; i.e., the budget would be managed according to the principles of functional finance (Lerner 1943; Nell and Forstater 2003). This approach requires a “modern money” system, i.e., a national fiat currency not fixed to a commodity or another country’s currency (no gold standard, currency board, “pegged” currency, or monetary union)—in other words, a floating exchange rate regime.

By creating an infinitely elastic demand curve for labor, the PSE program acts as a strong countercyclical fiscal stabilizer—the deficit grows when the economy contracts, and it shrinks when the economy expands. Aggregate demand is maintained at full, or nearly full, employment, with only the proportion of PSE to private- and regular public-sector employment changing over the business cycle. The program thereby addresses the effective demand problem.

Successfully solving the effective demand problem can exacerbate the structural change problem, however. High levels of employment and capacity utilization can result in production bottlenecks and other structural problems and heighten inflationary pressures. This effect is the reason that central banks, national governments, and international organizations resist policies that promote full employment and try to maintain a certain amount of excess capacity and a reserve army of unemployed by, for example, raising interest rates. Excess capacity

provides additional system flexibility and enables capital accumulation that is otherwise forgone due to structural rigidities.

Unlike traditional Keynesian demand management, the PSE approach also addresses the structural change problem and recognizes the functionality of unemployment. Offering jobs in the PSE sector to the unemployed permits full employment without the rigidities associated with full employment in the private sector. PSE program activities can be designed to avoid structural bottlenecks, while the program itself maintains a “reserve” of labor for the private sector without the social and economic costs of unemployment, thus addressing the functionality issue. In fact, the program, by maintaining and enhancing skills and knowledge, may perform this function more effectively than a reserve of unemployed, which leads to deskilling and, perhaps, more unemployment.

In terms of the relative bargaining power of capital and labor (i.e., how unemployment impacts wages and discipline), a PSE program can affect both sides of the negotiating table. Workers will always have the option of taking a PSE job, while firms will always have the option of hiring from the PSE pool.

Public Employment and Environmental Sustainability

A PSE program can promote environmental sustainability in two important ways. First, since PSE activities do not seek profits, the activities are designed and evaluated according to social, macro, or environmental efficiency criteria rather than cost-minimizing efficiency criteria of the private sector. My suggestion is akin to E.F. Schumacher’s (1973) “appropriate technology”: more labor-intensive methods of production may make sense even when more capital-intensive methods are available. PSE activities can be designed to use fewer natural resources, cause less pollution, and reduce ecological damage. Even if the activities were environmentally neutral, the outcome would be more sustainable than a private sector stimulated to full employment. Moreover, PSE activities can be designed to perform environmental

services. For example, a Green Jobs Corps could sustain the ecology in a variety of ways: community and industrial recycling, improved insulation for residential and commercial structures, carpooling, rooftop gardening and urban landscaping, solar energy applied to the public infrastructure (e.g., streetlights, schools, construction warning signs, billboards), monitoring and enforcement, environmental education, and research support.

Most activities do not require highly specialized skills, and the “learning by doing” effects could be considerable, as skills acquired by participants could be applied in the private sector, and this succession would further promote sustainability. In addition, increased awareness of environmental and ecological issues on the part of both participants and the public could change consumption patterns, which is vital for long-term sustainability.

Recycling and reuse present a tremendous opportunity for both job creation and environmental sustainability. We now know that “recycling is the singular environmental success story” of the 1990s: “many cities were able to increase the efficiency of their recycling efforts to the point that, on average, they compared very favorably with the costs of solid waste collection and disposal” (Folz 1999). Recycled materials are located in urban areas ready for use, while virgin materials are often located in remote areas (Ackerman 1997, 81). Recycling is more labor-intensive than waste disposal, and much of the labor need not be specially trained. Recycling has multiple benefits in that it not only means that society will utilize new materials at a slower rate, it also diverts materials from landfills and incinerators. Recycling can also result in a reduction of new resource depletion as well as pollution, if recycling itself does not pollute as much as new extraction and refining. Besides slowing the depletion rate, reduced use of some materials leaves resources to perform other environmental services, such as trees absorbing carbon dioxide. Recycling also can reduce costs in many areas.

Major recycling efforts should be divided into at least two major categories: community-based and industrial. Community-based recycling entails collecting, sorting, and cleaning materials and other

jobs that anyone can perform and that contribute to the community and the environment. Repair for reuse entails another whole set of operations and may be considered separately. Repair efforts may be for the original owners or for reuse by someone else. Chicago's Creative Reuse Warehouse is a good model for demonstrating how such items as "used office furniture and supplies, salvaged lumber, and broken bikes are turned into valuable assets for communities, schools, and the general public" (Weinberg et al. 2000). A Green Jobs Corps can run both recycling and repair efforts. Industrial recycling zones and parks may also be sites for Green Jobs Corps employees to perform certain jobs.

In addition to recycling and reuse, reconditioning is one of the important ways to create jobs and protect the environment:

The creation of new skilled jobs can be achieved in parallel with a considerable reduction of the energy consumption through a prolongation of the useful life of materials and products . . . linear "production—use—dump" patterns have to be replaced, for instance, by recycling and reconditioning loops or spirals in order to reduce utilization cost and environmental charges. (Stahel and Reday-Mulvey 1981, xv)

Reconditioning aims to extend the life of products rather than focusing on new goods, using recycled rather than virgin materials, and "closing material loops" through technological and fashion-upgrading of goods (Stahel 1997, 1311). One of the chief characteristics of contemporary unsustainable economies is planned obsolescence and throwaway products. "Wasting rates"—the share thrown away rather than recycled or reused—are high, and of course 100 percent for disposable products (Brown 2001). Michael Renner has estimated that weatherizing low-income housing units in the United States could create 1.4 to 1.8 million job-years, while resulting in significant conservation of energy and increasing quality of life (Renner 1991, 27).

A Green Jobs Corps could be employed at transforming homes and some businesses into having more efficient and more renewable heating, lighting, cooling, and refrigeration. This does not have to mean every building becomes completely transformed and solar powered, although photovoltaics clearly need to be exploited more. Initial ef-

forts may inspire homeowners and businesses to go further on their own. But even simple and basic adjustments would save money and reduce energy use. Better insulation alone could make a huge impact. Other types of weatherizing are also possible. Green Jobs Corps teams could be trained to visit, evaluate, educate, and make suggested or even required changes in a several-hour visit (patching areas, fixing items, blocking drafts, installing low-power shower heads).

Another major area that could be addressed by a Green Jobs Corps is automobile use and traffic congestion. Long-term sustainability may require larger structural changes and a move to other forms of transportation, but in the short term, a well-organized vanpool system could reduce traffic congestion and pollution for those areas not served by good transit. The Green Jobs Corps could drive and repair the vehicles, and experiments could be conducted using alternative vehicle types and fuels. A ten-person vanpool cuts private, social, and environmental unit costs to 15–20 percent of single-operated-vehicle costs (Vuchic 1999, 307). If the van is more fuel-efficient or uses alternative materials or energy, these costs will fall even more.

The Green Jobs Corps can also transform many items in the public infrastructure over to solar. Effective and reliable photovoltaic-powered streetlights, school crossing lights, highway construction warning signs, and billboards now are available (Cole and Skerrett 1995). In addition to saving energy, decreasing pollution, and reducing costs, public use of solar in these ways will help educate the public about the efficiency and reliability of photovoltaic power.

Another important area in which to involve the Green Jobs Corps is rooftop gardening and urban landscaping. The benefits of both these endeavors are little known. In addition to producing food (for humans), and food and habitat for wildlife, rooftop gardens and urban landscaping help purify air, soil, and water; provide air conditioning, shade, and windbreaks; and provide a productive sink for organic waste (Milani 2000, 105). Human waste could also be redirected and put to better use than polluting water. Modern composting toilet technologies are available and more user friendly than ever.

Another area of concentration for PSE workers could be in what

might be called environmental defense or environmental security. It may be desirable to create a whole section of PSE especially for a green security force, specifically devoted to two major areas: monitoring and cleanup. The new laws and rules will only effect change if there is monitoring to ensure compliance. Often, environmental legislation is criticized as being difficult to monitor, that it can only be done with great effort. PSE can support monitoring efforts, as well as testing, much of which can be done with relatively basic training. For instance, samples can be collected for labs with almost no training.

PSE workers can also support cleanup efforts. Obviously some types of cleanup require special skills and equipment, but a tremendous amount can be done with basic training, and much of it is more or less unskilled. With the support of a well-managed PSE plan, monitoring and cleanup can be supported at a level that is consistent with the shift to sustainability.

Environmental sustainability requires information dissemination and education. From preschool to the university, in the community and the workplace, sustainable practices cannot be adopted without changing some of our most ingrained habits. Moving from the waste-disposal mentality to the recycle/reuse/reduce/repair mentality requires socialization and education. PSE workers can do presentations in classrooms and workplaces. They can set up tables in the community to demonstrate the effectiveness and simplicity of many sustainable practices.

PSE workers in a Green Jobs Corps can help to cut research and development costs significantly by providing the labor to perform a variety of tasks, as well as contributing to sustainability in many other ways. The task here is not to give a comprehensive listing of such services, but to point to the possibilities for enhancing the environment that is presented by a PSE program.

Functional Finance and Ecological Tax Reform

A PSE program based on the principles of functional finance can be combined effectively with ecological tax reform to further environ-

mental sustainability. The functional finance approach to budgetary policy is appropriate for a “modern money” economy (Forstater 1999b; Nell and Forstater 2003). Modern money is state fiat (Chartalist) money that operates with flexible exchange rates and is not backed by a commodity or tied to another currency (Bell and Nell 2003; Lerner 1947). Functional finance, as formulated by Abba Lerner (1943), means that government spending, lending, borrowing, taxing, buying, and selling should be judged only by the *effects* of such actions on the economy and society, rather than by the tenets of “sound finance.” No particular relationship between government spending and tax revenues, for example, is good or bad independently of a fiscal stance’s effect on the economy. The effect of a budget deficit depends on the economic conditions at the time and the goals of society.

It has been shown that under a modern money system, neither taxes nor bonds finance government spending (Bell 2000), but these operations have other purposes. The purpose of taxation is “its effects on the *public* of influencing their economic behavior” (Lerner 1951, 131). The purpose of bond sales is to manage bank reserves and short-term interest rates (Lerner 1943, 355).

Taxes are intended to modify two broad categories of behavior. First, taxes (and the requirement that government currency satisfy tax liabilities) create a demand for state money. This is what is meant by a “tax-driven money” system (Wray 1998). People accept state currency in exchange for goods and services (or as a means of settling debt) because they need to pay taxes or know that others who need to pay taxes will accept it, and so on. Second, taxes modify undesirable behavior when they are levied on unhealthy products or technologies to discourage people from purchasing such items or engaging in certain activities. This kind of tax is *not* intended to raise revenue but to influence behavior. Likewise, tax credits or subsidies are also intended to influence behavior.

Ecological tax reform (including subsidies, quotas, and other incentive-based regulations) fits very nicely into the functional finance framework. An ecological economist’s distinction between money (accounting information not subject to the laws of physics) and real

resources (which are subject to biophysical limits) is also consistent with the functional finance perspective (Daly 1996, 178 ff.), although some “sound finance” conclusions are not consistent with functional finance.

Ecological tax reform begins from the premise that current tax and regulatory structures of most modern countries are not consistent with ecological sustainability. Current taxes tend to discourage behaviors that should be encouraged, and vice versa. For example, taxes on income and employment discourage work and job formation, while low tax rates and subsidies for resource extraction and “dirty” technologies encourage pollution and resource depletion. In some cases, taxes or tax breaks may encourage the right behavior but are insufficient, or need to be coupled with complementary policies, to produce a comprehensive effect. A functional finance approach to ecological tax reform could begin with the elimination of federal payroll and income taxes and the adoption of certain property taxes. Taxes, tax credits, subsidies, quotas, licenses, low-interest loans, and other regulatory policies could penalize unsustainable behaviors and reward green ones.

This is not the place for a comprehensive outline of ecological tax reform, as functional finance and ecological tax reform are discussed in detail elsewhere (Forstater 2002, 2003). My objective is to encourage ecological tax reform, as outlined above, and to rid proposals of “sound finance” principles. Integrating functional finance and ecological tax reform would assist in the shift to a path where both full employment and ecological sustainability are possible.

Conclusion

Modern capitalism fails to provide full employment or ecological sustainability. These issues are not going to go away but will likely become progressively more difficult to cope with and to solve. Unemployment and underemployment are responsible for many of our most pressing economic and social problems, while degradation of the natural environment threatens human survival itself.

A PSE program based on principles of functional finance can be designed to address these problems, and I have outlined some of the logic behind such a program. It is imperative that economists earnestly explore the possibilities for an economically and ecologically sustainable society. Now is the time to discuss and debate policies that address the critical issues concerning the environment, the workplace, and employment, and the role of a Green Jobs Corps program in the shift to sustainability.

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