

*in the calculation of a firm's contribution to output and all activities that improve the environment because they provide real economic benefits to the people be added to output.*"<sup>5</sup>

In this regard some western economists have pointed out that some developing countries in their attempt to speed up economic growth and raising their GDP as rapidly as possible have overexploited the natural resources and caused a good deal of environment pollution and natural resources degradation, they therefore suggest that costs of environment pollution and natural resources degradation are incorporated in their estimates of growth of GDP and their growth policies need to be modified. However, in our view this is not entirely correct to blame the developing countries who want higher GDP growth rate to reduce poverty in their countries. As a matter of fact, it is the developed countries who in the past for achieving rapid industrial growth have contributed a lot to the emission of harmful gases such as carbon dioxide that have significantly contributed to the global warming affecting the welfare of the people of developing countries. As a matter of fact, they should not only provide financial assistance to the developing countries for the harm done to the global environment in their growth process in the past but also transfer technology that ensures protection of environment from the growth processes in poor developing countries.

However, apart from what the developed countries say, it needs to be emphasized that India needs **green growth**, that is, growth in green GDP so as to ensure environment sustainability and thereby to promote the welfare not only of the current generation but also of future generations. India's quest for growth with the objective to pull out millions of its people from poverty is a necessary and legitimate pursuit. But so is the pursuit of clean and safe environment and conservation of natural resources. No growth process can afford to neglect the environmental consequences of economic activity, or allow unsustainable depletion and deterioration of natural resources. For the last over one decade (2003-14) India is the second fastest growing economy in the world, next only to China. The growth cannot take place without additional energy. The Indian economy heavily depends on coal and hydropower to meet its energy needs and the growth of each of these energy sources involves the issue of protection of environment and depletion of its natural resources. Therefore, the pursuit of our growth objective has to be reconciled with the objective of protection of environment. Unfortunately, the experience of growth in many countries and our own experience suggests that environmental pollution and unsustainable depletion and deterioration of natural resources occur due to laxity in environment monitoring. This has to be avoided in the future to achieve clean and sustainable growth. Therefore, we have to explore the sources and practices that use less of the polluting agents and more of clean sources of energy such as solar energy and nuclear energy. A good start has already been made in India in both these alternative sources of energy.

If growth of green GDP is adopted, then the growth will promote welfare of the people and protect them from health hazards. For such growth to occur, environmental and ecological consequences of growth activities must be taken into account. The current estimates of growth based on GDP and national income as conventionally measured do not reflect a true and genuine growth in the sense of green and sustainable growth. Kenneth Arrow and Parthadas Gupta find India's growth rate to be 2.5 to 3 per cent lower than the reported average of 7.6 per cent achieved in the last 11 years (2003-14). Therefore, we conclude that a green economy will make growth more inclusive and sustainable. Neglecting the ecological consequences of growth adversely affects the welfare of the people in the long run.

### **SOME EXAMPLES OF NATIONAL INCOME CALCULATION**

We solve below some numerical problems of calculation of national income by three methods, namely, expenditure method, income method and value added method.

5. Andrew B. Abel, Ben S. Bernanke and Dean Croushore, *Macroeconomics*, 7th edition, Pearson, 2011, p. 29.