

Sustainable and Green Public Procurement: An Indian Perspective

Abstract

Public Procurement is a process whereby government agencies are indulged in purchasing goods and availing services from the private parties. In India, the General Financial Rules, 2017 and Manuals provides rules and procedure for public procurement with an aim to make the process more transparent and achieve principles of sound public procurement. Public Procurement with time has witnessed growth and innovations in order to cater the needs of an ever-changing environment. Considering the need to provide efficient resources to the public in a cost-effective manner and to provide a best value of money on public utility goods and services, the public authorities have developed Sustainable Public Procurement ("SPP") and Green Public Procurement ("GPP") as one of the innovative concepts. SPP is a process whereby the procurement is done adhering to the present environmental considerations in order to achieve economic efficiency. United Nations Environment Procurement ("UNEP"), had developed a 10 year framework programme on Sustainable Consumption and Production in 2014. In Indian context, the Procurement Policy Division of the Department of Expenditure *vide* an Office Memorandum had decided to constitute a Sustainable Procurement Task Force to review international best practices qua SPP, inventorise the current status of SPP in India across the Govt. organisations, prepare a draft Sustainable Procurement Action Plan and recommend an initial set of produce/service categories where SPP can be implemented. However, the concept is not evolved in India yet. GPP is a voluntary instrument, however the public authorities through legislation or policies can decide the extent to which the concept ought to be implemented in the national economy. Moreover, the public sector, by showing its commitment to sustainable public procurement (SPP), can give an impetus to investment in research and innovation for sustainable technologies. This article broadly discusses the fundamentals of public procurement, innovations in public procurement in form of SPP and GPP in EU and India and has also sought to highlight benefits and challenges in implementing the same.

Keywords: Public Procurement, SPP and GPP, Public Private Partnership Projects.

Introduction

Public Procurement is the acquisition of goods, works or service or any combination including PPP Projects through purchase, lease, license or any other method by a procuring entity, either directly or through an agency with which a contract for procurement services is entered.¹

Further, the term public procurement has been defined in the procurement manuals² issued and revised from time to time by Ministry of Finance, Department of Expenditure, as a means of acquisition by way of purchase, lease, license or otherwise, either using public funds or any other source of funds (e.g. grant, loans, gifts, private investment etc.) of goods, works or services or any combination thereof, including award of Public Private Partnership projects, by a procuring entity, whether directly or through an agency with which a contract for procurement services is entered into, but does not include any acquisition of goods, works or services without consideration, and the term "procure" or "procured" shall be construed accordingly.

Public Procurement process in itself is a complex process starting from determining the need of a certain service and issuing the invitation to register the bid and granting the award/contract, which further extends till ensuring the execution of contract³ and assuring timely payment till finality of work or contract whichever comes first.

Aakriti Kohli
Research Scholar,
Dept. of Law,
National Law University,
Delhi, India

The aforesaid process undergoes the same cycle in every Public Procurement project undertaken between the bidder and the Public Procurement agency.

The General Financial Rules, 2017 ("GFR")⁴, issued by the Ministry of Finance, Department of Expenditure, Government of India lays down extensive rules and procedure for public procurement.

Rule 144 of the GFR, 2017 enumerates the Fundamental principles of public procurement. The said rule casts a duty on the authorized procurement agencies to achieve economy, efficiency and transparency and accountability in public procurement.⁵ Moreover, such a responsibility is vested with a pre-requisite to provide fair and equitable treatment of suppliers and promotion of competition.⁶ Further, Rule 144 has specifically devised the parameters on which the public procurement procedure should be based.⁷

However, it emphasizes the procurement process to be generic, specific, transparent and follow the principles of natural justice.

In a broader sense, the fundamentals of public procurement can be classified in to the following principles i.e. (a) Transparency and Accountability, (b) Competition and (c) Non-Discrimination and Fairness.

The GFR Rules, 2017 along with the Manuals on Procurement of Goods, Works and Services⁸ as well as CVC Guidelines⁹ on Public Procurement encompasses the above said principles of public procurement in India.

The above-mentioned fundamental principles seek to ensure implementation of a transparent and a non-arbitrary process to promote equality in opportunity to all the potential contractors and stakeholders.

Further, the preference to certain kind of products and services are given in public procurement under purchase preference policies of the Government.¹⁰

This preference has been given to promote the development of Micro, Small and Medium Enterprises.

Public Procurement is an ever-evolving process and the concept has witnessed growth and innovation from time to time. Moreover, considering the technological advancement and a need to provide efficient resources to the public in a cost-effective manner and to provide a best value of money on public utility goods and services, the public authorities are keen in investing in innovative concepts of public procurement.

Considering the rising pollution and effects of resource wastage in the system, government is also considering sustainable procurement of the resources in order to cause a minimal damage to the environment. Therefore, the public officials seek to promote an innovative system for procurement of the goods and services.

In this article, the researcher aims to explore these rising innovative practices in public procurement. Sustainable Public Procurement and Green Public Procurement as new green initiatives to

achieve a cleaner system for the procurement system has been discussed in length along with their aims and challenges.

Sustainable Public Procurement

The United Nations defines¹¹, Sustainable public procurement as a "Process whereby public organizations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life-cycle basis in terms of generating benefits not only to the organization, but also to society and the economy, whilst significantly reducing negative impacts on the environment."¹² In other words SPP is a process whereby the procurement is done adhering to the present environmental considerations in order to achieve economic efficiency.

Sustainable Procurement at the local level seeks to achieve a balance among the economic, social and environmental level of public procurement.¹³ The economic factors herein being the cost of procurement of the goods and services, maintenance of the goods, operations and management costs and a good financial management. Social factors include social justice, safety, equity and fostering human rights, and adhering to the labour law standards. Environment factors include adhering to the environmental law and policies for protection of bio-diversity, natural resources, water, air etc.¹⁴

It is stated that in OECD Countries, Public Procurement expenditure amounts to 12% of the GDP and extend up to 30% in certain developing countries.¹⁵ Therefore, utilising such a humungous expenditure to purchase more sustainable goods and supplies can reduce the negative impacts and derive positive benefits for the environment and the society. Internationally, the concept of SPP is regarded as an important facet to achieve the Sustainable Development Goals.¹⁶

Sustainable Procurement is not only adhered by public authorities but the private parties also under certain international obligations are duty bound to adhere to the principles of sustainable development. The members of European Union are duty bound to enact a law *para materiato* its Directives on Public Procurement i.e. Directive 24/2014/EU, wherein they have to imbibe the provisions of Ethical & Social Public Procurement as stated under Article 18.2 of the Directive, whereby principles *vis-à-vis* social and environmental standards are laid down on how contracting authorities can procure goods and services in an ethical manner.¹⁷

In other words, the member nations are duty bound to take "appropriate measures" to ensure, there is a compliance of obligations as enumerated in the environmental, social and labour laws in order to procure the public goods.

However, with intent to encourage Sustainable Public Procurement, the United Nations Environment Procurement ("UNEP") developed a 10 year framework programme on Sustainable Consumption and Production and henceforth established a programme on SPP in 2014.¹⁸ Moreover, the UN Conference on Sustainable

Development i.e. Rio +20 was setup with an objective to promote sustainable patterns of consumption and production as the essential objectives for sustainable development.

10 YFP SPP Programme is a global framework to enhance the international cooperation to facilitate the use of sustainable methods in public procurement and consumption in developed and developing countries. The programme is an outcome of Rio +20 Conference.

The programme provides technical and financial assistance to developing countries and encourages innovation and cooperation among all the member nations. Further, the UNEP serves as the secretariat of the 10YFP SPP Programme and administers its trust funds.

Sustainable Procurement: An Indian Perspective

As discussed previously, the legal and policy regime of public procurement in India is fragmented, there being no legislation at the central level. Few states like Tamil Nadu, Karnataka have framed legislations, however, as discussed the public procurement is largely governed by GFR Rules as framed by Ministry of Finance from time to time.

To fill the lacuna in the existing regime, Public procurement Bill, 2012 was introduced which also had a provision for sustainable and green procurement however the bill lapsed due to dissolution of the Lok Sabha.

Therefore, existing state level laws and GFR do not deal with SPP directly or prohibit SPP per se, but limit the legitimization of sustainable procurement based on environmental and social criteria.

The Procurement Policy Division of the Department of Expenditure, Ministry of Finance on 19.03.2018 vide an Office Memorandum¹⁹, had decided to constitute a Sustainable Procurement Task Force with the following Terms of Reference:-

1. Review international best practices qua SPP
2. Inventorise the current status of SPP in India across the Govt. organisations
3. Prepare a draft Sustainable Procurement Action Plan
4. Recommend an initial set of produce/service categories where SPP can be implemented.

The said Office Memorandum stated that more than 40 countries had implemented policies on sustainable development and in India more economic and environmental gains can be unlocked through developing an efficient policy on SPP. Moreover, in India the following areas were identified for the policy development of SPP being: the need for consulting and industry strengthening the certification and eco labelling systems, developing tool kits for use of LCC in various sectors, training and capacity building of procurement officers etc.²⁰

Some policy initiatives by the Indian Government Departments/Ministries/PSUs in creating Sustainable Public Procurement-

1. Ministry of Environment, Forest & Climate Change, Government of India instituted Eco Mark Scheme or Eco Mark Label to have procurement of environmentally safe products.

Such products have less potential for pollution than other comparable products in production, usage and disposal. They can be recycled and make significant contribution in saving of non-renewable resources. Bureau of Indian Standards administers the Eco Mark Scheme.

However, the scheme has not been very successful.²¹ The lack of demand from the Government side, lack of competition in the market for the manufacturer, easy and cheap availability of non-environmental friendly products and lack of conscious regarding the environment has been few reasons.

1. The Bureau of Energy Efficiency, a statutory body under Ministry of Power launched a standards and labelling programme in 2006. Under the program the manufacturers are required to get themselves and their products registered to get the star label approval. BEE has two lists of electrical appliances: Mandatory and Voluntary. There are empanelled labs for carrying out the testing of the products that manufacturer requires to be labelled. The testing is done on regular basis and is not less than once in a year. In case of suo-motu or written complaint against the product challenge testing is carried out in a separate lab. If the testing fails financial penalties are invited along with publication of name and model of the failed product in media and newspaper.

However, except the few initiatives as discussed above, there is no enabling framework for sustainable public procurement in India.

Green Public Procurement

Green Public Procurement ("GPP") in a lucid sense can be stated as "*public procurement for a better environment*".²² However in other words it is a process *whereby government and its agencies seek to procure goods, services and works with a reduced environmental impact throughout their life-cycle when compared to goods, services and works with the same primary function that would otherwise be procured*" (Commission of the European Communities, 2008)²³.

Although, GPP in fundamental sense is a voluntary instrument, however the public authorities through legislation or policies can decide the extent to which the concept ought to be implemented in the national economy.

While green procurement deals only with environment criteria, Sustainable Procurement takes into account Environmental, Social and Economic Criteria.²⁴ However, in few countries the terms are used interchangeably.

In an economic sense, the concept of GPP is influencing the market in a manner whereby the public authorities provide incentives to the industries for developing green technologies, machineries and goods to reduce the collateral environmental damage and in order to enhance it into an economic innovation.²⁵ It has been found that various countries have developed certain guidelines qua GPP. Examples: The eco-mark label in India and recently the Confederation of Indian Industries a certification scheme called Green Products or GreenPro to

promote green products.²⁶ However, it has been observed that more than 100 products have been certified but the criteria for the same are ambiguous.²⁷

Green Public Procurement: Case Study on India

Considering the massive contribution of Public Procurement in India's GDP, the public sector can through its initiatives create environmental and economic benefits by implementing the concepts at local levels of public utility services.

It has been observed that certain public authorities in India have started internalizing and implementing specific aspects of GPP within the system. For instance, Indian Railways, Bharat Heavy Electricals Limited (BHEL), National Thermal Power Corporation (NTPC), and Indian Oil Corporation are actively trying to work towards sustainable public procurement in a decentralized way with major area of focus on procurement of energy conserving equipment and procurement process of small items. However, these efforts are usually isolated and cannot be scaled on an organizational level across different sectors and industries.²⁸

Moreover, Indian Railways has introduced several small green measures to move along the process. They now produce modern green three-phase drive locomotives with regenerative capability of producing electric power during breaking of trains along with conventional locomotives. This has been done by forming collaboration with General Electric (GE) and BHEL. The use of biodegradable bottles for Rail-Neer, biodegradable paper cups, use of leaf plates, etc. have been a step towards a greener environment in the organization.²⁹ The paperless e-tickets have been a successful introduction reducing the paper waste and costs in the system.

However, despite there are steps being taken in India towards implementing a greener procurement process of products and supplies, India still lacks a robust mechanism to implement Green Public Procurement.

However, it has been noted that the Public Procurement Bill, 2012 *vide* Section 21, had laid down the criteria for evaluation for procurement award whereby the environmental characteristics of the subject matter was also considered.³⁰ However, the said Bill has lapsed due to dissolution of 15th Lok Sabha and currently there is no such express provision or policy regarding Green and SPP.

Benefits of GPP

Green Public Procurement (GPP) has undoubted benefits for the environment, but it is not limited to just its environmental impact. GPP has a degree of impact ranging from social and health to economic and political benefits as well, which are discussed as follows:-

1. The City of Vienna saved €44.4 million and over 100,000 tonnes of CO₂ between 2004 and 2007 through its EcoBuyprogramme.³¹
2. If all IT purchases in Europe followed the example of Copenhagen City Council and the Swedish Administrative Development Agency, energy consumption would be cut by around 30 terawatt hours – roughly the equivalent of four nuclear reactors.³²

3. CO₂ emissions would be cut by 15 million tonnes per year if the whole EU adopted the same environmental criteria for lighting and office equipment as the City of Turku, Finland - reducing electricity consumption by 50%.³³

Environmental Benefits³⁴

GPP by raising green standards in the procurement process raises the environmental concerns and creates an environment of use of alternative products and services which have lesser impact on the environment. It identifies the environmental impact of a particular product or service throughout their life cycle and provides information on benefits of alternative greener products.³⁵ Moreover, GPP allows public authorities to achieve environmental targets in following forms: -

1. Addressing the environmental issue of deforestation by means of purchase of woods and wood products from legally harvested forests.
2. Addressing the environmental issue of Greenhouse Gas emissions by the means of purchase of products and services with a lower CO₂ footprint throughout their life cycle.
3. Addressing the environmental issue of water use by choosing effective water fittings.
4. Addressing the environmental issue of energy efficiency and resource use by choosing more efficient products and implementing environmentally conscious design principles.
5. Addressing the environmental issue of air, water and soil pollution by controlling chemicals and limiting the use of hazardous substances.
6. Addressing the environmental issue of waste by encouraging reuse and recycle of materials
7. Addressing the issue of sustainable agriculture by the means of purchase of organically produced food.

Benefits for private consumers

Green purchasing would mean that the public authorities would set an example for the general public and private sectors and influence the marketplace. Their results would prove that there is scope of action in this area and that it would lead to positive outcomes. This could also encourage the private sector area to try and lay down certain green criteria for their own procurement.

Economic Benefits

GPP saves money and resources when life-cycle costs are considered

GPP would often save costs incurred when the life-cycle of the products and services are considered, even though the upfront cost may seem higher. A study carried out in 2008, revealed that in general GPP does not increase costs but rather cut the costs for the authorities purchasing the goods or services.³⁶ More efficient and green products would save energy resources and increase the life span of the product and in turn be more profitable to the public authorities.³⁷

GPP provides incentives to industries to innovate

GPP promoting green procurement of products or services gives the industries real incentives to develop 'green' technologies and

machinery for their products and services and promote them in the marketplace.³⁸

Challenges to implement GPP (As identified in the RELIEF Project and European Commission Survey on "Green Public Procurement in Europe, 2006".)³⁹

Lack of Political Support

According to the "Green Public Procurement in Europe, 2006", report a high percentage of public authorities stated a lack of management's support for a broader implementation of the GPP. This shows that the higher officials in the public sector are not aware of the importance of the GPP agenda.

Green products are perceived to cost more

The changing behavior within the purchasing departments has been a key challenge in implementation of procurement of green products. Considering only the purchasing price and not the life-cycle costs of the products creates an impediment to the spread of the GPP in the marketplace.

There is a lack of awareness of the fact that even though the costs incurred while purchasing green goods initially seem higher, these alternatives have lower maintenance, operating and disposal costs over its life cycle, thereby, compensating for the higher costs incurred initially.

However, the 2011 study on Uptake of Green Public Procurement in the EU 27, by the Centre of European Policy Studies, showed that purchasing costs are still the predominant criterion for awarding contracts. 64% of the respondents mainly use the lowest price of purchasing costs as the major criteria to award contracts, showing that the green products have still not been able to mark their place in the marketplace.

Lack of Legal Expertise in Application of Environmental Criteria

Authorities still struggle to define and identify what an "environmentally and/or socially preferable" product or service is and how to ascertain a criteria to be implemented in the tendering process. Assessment and verifiability of the information submitted by the tenderers is also a difficulty in the process of implementation of GPP in the market.

Lack of Practical Tools and Information

There is a general lack of awareness amongst the authorities. The lack of information and practical tools to implement the GPP has become one of the major issues which need to be addressed at all levels in the organization.

Lack of Training

The specific skills for carrying out the specific tasks of the implementation of GPP are generally either lacking in the staff concerned or they are not trained to comply with the tasks. Training is generally required for procurers on the legal and technical aspects of GPP implementation, on the concept of life-cycle costing and for end-users on the sustainable use of products.

Limited Established Environmental Criteria

Most of the products and services, public authorities do not have access to verifiable and established environmental criteria for incorporating them into the procurement process.

The above stated challenges finds place in the Indian scenario as well, where there is lack of knowledge and understanding of the benefits of GPP and SPP. An enabling legal and policy framework with capacity building and awareness of all the stakeholders involved in the public procurement processes is the need of an hour. All these measures have to be supported by a dedicated policy framework for sustainable public procurement in India and has to be facilitated by political will, decisions at the firm or department level, improved and comprehensive guidelines. Successful implementation of these measures requires active support of policy-makers, suppliers, procurement officials and general public.⁴⁰ These measures are essential to create long term benefits for the economy, environment and the society through SPP in India.

Further, an effective implementation of GPP and SPP can only happen if it is integrated at each stage of the procurement process i.e. Need identification and assessment phase, formulating technical specifications, selection criteria, award criteria and contract management.

Conclusion

This article has dealt with public procurement as a defined concept, wherein it was noted that it is acquisition of goods, works or service or any combination including PPP Projects through purchase, lease, license or any other method by a procuring entity, either directly or through an agency with which a contract for procurement services is entered. Further the researcher has also discussed certain innovation in public procurement being Sustainable Public Procurement and Green Public Procurement. Moreover, the researcher also has discussed in brief, the possible challenges of the same.

However, it has been concluded that the aim of procurement is to foster a balance between welfare of the citizens and enhancing economic growth by utility services. The researcher has further noted that with the technological advancements and dawn of reason there came a need for growth of innovative practices within the procurement process. However, in India the concept of Sustainable Public Procurement and Green Public Procurement has still not witnessed its development stages.

Sustainable Public Procurement and Green Public Procurement came with the age of awareness of procuring goods which are better alternatives for products that can create a negative impact on the environment and society. These two models look towards the life cycle costs and impact of the products that are being procured on the environment, thereby, furthering broader spectrum of objectives for the society. The researcher has observed that even though there was a mention of these two models in the Article 21 of the Public Procurement Bill which was never enacted and hence, there are quite a few hiccups in their implementation in the country. The researcher also suggests in this article that considering a major portion of public spending is done on the Public Procurement sector, India can really

make a mark in the global market by leading by example.

Moreover, the researcher has noted that even though the agenda of Public Procurement is to mutually achieve socio-political and economic goals, there are certain impediments existing in implementing the same.

The researcher, thus, concludes in this article that even though there have been initiatives in the sustainable and green procurement process, there are certain challenges that these innovative practices face in gaining a steady rise in their implementation. India still lacks framework to effectively bring SPP and GPP in practice which in time needs to be defined and executed.

Endnotes

1. *Public Procurement Bill No. 58 of 2012, Section 2(r).*
2. *Manual for Procurement of Goods, 2017; Manual for procurement of Works, 2019, Manual for procurement of Consultancy and Other Services, 2017, Ministry of Finance, Department of Expenditure.*
3. "Procurement process" means the process of procurement extending from the assessment of need; issue of invitation to pre-qualify or to register or to bid, as the case may be; the award of the procurement contract; execution of contract till closure of the contract. (*Public Procurement Bill No. 58 of 2012, Section 2(t).*)
4. *General Financial Rules, 2017, Ch 6, Government of India, Ministry of Finance, Department of Expenditure.*
5. *General Financial Rules, 2017, Rule 144, Fundamental Principles of Public Buying (for all procurements including procurement of works).*
6. *Ibid.*
7. *The procedure to be followed in making public procurement must conform to the following yardsticks:- (i) The description of the subject matter of procurement to the extent practicable should - a) be objective, functional, generic and measurable and specify technical, qualitative and performance characteristics. b) not indicate a requirement for a particular trade mark, trade name or brand. ii. the specifications in terms of quality, type etc., as also quantity of goods to be procured, should be clearly spelt out keeping in view the specific needs of the procuring organisations. The specifications so worked out should meet the basic needs of the organisation without including superfluous and non-essential features, which may result in unwarranted expenditure. iii. Where applicable, the technical specifications shall, to the extent practicable, be based on the national technical regulations or recognized national standards or building codes, wherever such standards exist, and in their absence, be based on the relevant international standards. In case of Government of India funded projects abroad, the technical specifications may be framed based on requirements and standards of the host beneficiary Government, where such standards exist. Provided that a procuring entity*

may, for reasons to be recorded in writing, adopt any other technical specification. iv. Care should also be taken to avoid purchasing quantities in excess of requirement to avoid inventory carrying costs. v. offers should be invited following a fair, transparent and reasonable procedure. vi. the procuring authority should be satisfied that the selected offer adequately meets the requirement in all respects. vii. the procuring authority should satisfy itself that the price of the selected offer is reasonable and consistent with the quality required. viii) at each stage of procurement, the concerned procuring authority must place on record, in precise terms, the considerations which weighed with it while taking the procurement decision. (ix) a complete schedule of procurement cycle from date of issuing the tender to date of issuing the contract should be published when the tender is issued. (x) All Ministries/Departments shall prepare Annual Procurement Plan before the commencement of the year and the same should also be placed on their website. (See: Rule 144, General Financial Rules, 2017).

8. *Supra at Note 2*
9. *Central Vigilance Commission, Tender Guidelines, available at <http://www.cvc.nic.in/guidelines/tender-guidelines>*
10. *Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012, available at <https://msme.gov.in/public-procurement-policy-micro-and-small-enterprises-mses-order-2012>*
11. *United Nations Environment Programme, sustainable consumption and production policies, source: <https://www.unenvironment.org/explore-topics/resource-efficiency/what-we-do/sustainable-consumption-and-production-policies>, (last accessed on 25.02.2019).*
12. *Supplement to the 2012 annual statistical report on United Nations Procurement, balancing social, environmental and economic considerations in procurement, UNOPS.*
13. *Ibid.*
14. *Supra. Note 36*
15. *Pavoni, Riccardo & Piselli, Dario. (2016). The Sustainable Development Goals and International Environmental Law: Normative Value and Challenges for Implementation.*
16. *Member States shall take appropriate measures to ensure that in the performance of public contracts economic operators comply with applicable obligations in the fields of environmental, social and labour law established by Union law, national law, collective agreements or by the international environmental, social and labour law provisions listed in Annex X*
17. *Global action for sustainable consumption and production, The 10 year framework of programmes on sustainable development consumption and production patterns (10YFP), https://sustainabledevelopment.un.org/content/documents/1444HLPP_10YFP2.pdf (last accessed on 25.02.2019)*

18. No. F. 18/22/2017-PPD, dated 19.03.2018, Govt. of India, Ministry of Finance, DOE, Procurement Policy Division
19. *Ibid.*
20. www.moef.gov.in/sites/default/files/Taskforce_1.PDF (Last accessed on 05.03.2019).
21. Commission of The European Communities, Public procurement for a better environment, Brussels 16.07.2008 COM(2008)400 final
22. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Public procurement for a better environment {SEC(2008) 2124} {SEC(2008) 2125} {SEC(2008) 2126} /* COM/2008/0400 final */
23. www.moef.gov.in/sites/default/files/Taskforce_1.PDF (Last accessed on 05.03.2019)
24. Dr. Prasad Modak, Green Public Procurement – A Potential Game Changer for India, www.perspectives.deval.org, (last accessed on 24.02.2019).
25. *Ibid.*
26. *Ibid.*
27. Dr. Prasad Modak, Green Public Procurement – A Potential Game Changer for India, www.perspectives.deval.org, (last accessed on 24.02.2019).
28. *Ibid.*
29. Section 21(1) Save as otherwise provided in this Act or the rules made thereunder or in any other law for the time being in force, the evaluation criteria shall relate to the subject matter of procurement and may, as applicable, include—
(d) the characteristics of the subject matter of procurement, such as the functional characteristics of goods or works or the environmental characteristics of the subject matter
30. Klimaschutzprogramm "ÖkoKauf Wien" spart CO₂ und Geld (City of Vienna, 2008) available at: www.wien.gv.at/rk/msg/2008/0326/011.html
31. Green procurement makes a difference: Prime examples from the Nordic countries at page 5 (Nordic Council, 2009) available at <http://www.norden.org/da/publikationer/publikationer/2009-740>. The criteria applied relate to energy consumption, noise, recycling and dangerous substances.
32. Green procurement makes a difference: Prime examples from the Nordic countries (Nordic Council, 2009) at page 5.
33. European Commission, Environment, Benefits of GPP, http://ec.europa.eu/environment/gpp/benefits_en.htm, (last accessed 24.02.2019)
34. *Ibid.*
35. Collection of statistical information on Green Public Procurement in the EU, Report on data collection results, PricewaterhouseCoopers, Significant and Ecofys, Jan 2009
36. *Ibid*
37. European Commission, Environment, Benefits of GPP, http://ec.europa.eu/environment/gpp/benefits_en.htm, (last accessed 24.02.2019)
38. European Commission, Environment, Barriers to the take-up of GPP, http://ec.europa.eu/environment/gpp/barriers_en.htm, (last accessed 24.02.2019)
39. https://www.teriin.org/policybrief/docs/spp_2013.pdf, last accessed on 10.12.19.