Internalisasi konservasi daerah tangkapan air (evaluasi pemanfaatan sumberdaya air di wilayah Sukabumi Jawa Barat) = Internalization of the conservation of water catchment area (evaluation of water resources utilization in Sukabumi District, West Java)

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Abstrak

Sumber air utama untuk wilayah Sukabumi tertumpu pada kawasan pegunungan Gunung Gede-Pangrango dan Gunung Halimun- Salak. Kawasan tersebut adalah hulu dari daerah aliran sungai Cimandiri yang mengalir ke selatan wilayah Sukabumi sampai ke Iaut di Kota Pelabuhanratu, ibukota Kabupaten Sukabumi.

Pemanfaatan air di kawasan hulu berupa air tanah dan air mata-air selain untuk kebutuhan rumah tangga juga untuk industri. Keuntungan dari pemanfaatan air tersebut oieh industri umumnya belum disertai membayar beaya pemulihan.

Penggunaan air cenderung meningkat secara eksponensial, sedangkan pasokan air cenderung melambat akibat rusaknya hutan di daerah tangkapan airnya. Internalisasi pengelolaan daerah tangkapan air untuk penyediaan air baku dilakukan untuk mengatasi masalah tersebut

Tujuan penelitian adalah mendapatkan gambaran kondisi air tanah dan perkiraan nilai air tanah melalui pendekatan perhitungan nilai ekonomi manfaat lokal daerah tangkapan airnya, persepsi dan keharusan pengguna air tanah untuk membayar beaya pengelolaan daerah tangkapan airnya.

Hasii penelitian diharapkan dapat memberikan informasi untuk melestarikan sumberdaya air dan melestarikan fungsi lingkungan alam. Informasi dari penelitian ini dapat memperkaya khasanah pengetahuan untuk pertimbangan dalam perencanaan pembangunan daerah tersebut.

Penelitian dilaksanakan dan bulan Januari sampai dengan Juni 2003 di Kecamatan Cicurug, Kecamatan Cidahu, Kecamatan Parakansalak dan Kecamatan Parungkuda di kaki Gunung Salak dalam wilayah Kabupaten Sukabumi. Daerah penelitian berada pada Kompleks Gunungapi Tua di wiilayah resapan utama dan juga berada di wilayah pelepasan. Penelitian bersifat ex post facto melalui pendekatan kualitatif dan kuantitatif. Data primer dan sekunder dikumpulkan dengan metode survei dan studi pustaka.

Hipotesis yang diajukan adalah tersedianya air tanah akan berlanjut jika neraca air terjaga keseimbangannya dan daerah tangkapan air terlindungi.

Hasii kajian memperlihatkan bahwa air tanah ada di 100-300 meter di bawah permukaan tanah setempat. Pelepasan air tanah berupa mataair ada yang mencapai 400 lt/dt dan penurapan melalui sumur bor dengan debit mencapai 2 It/dt hingga 5 lt/dt. Neraca keseimbangan air di daerah penelitian mengaiami defisit air tanah sebanyak 4,4 juta m3 pada tahun 2003. Kecenderungan air tanah berkurang adalah akibat perubahan

kondisi tutupan lahan disertai dengan ekstraksi air tanah yang terus bertambah.

Hasil analisis ruang dan wilayah daerah penelitian memperlihatkan adanya interaksi antara daerah tangkapan air dan daerah perlepasan serta lokasi cadangan air tanah. Kegiatan ekonomi yang menggunakan air tanah tidak terpisahkan dari kawasan hutan Iindung Gunung Salak sebagai daerah tangkapan airnya. Pemanfaatan air tanah di kawasan hulu akan dapat menghilangkan peluang kegunaannya bagi kawasan hilirnya. Sepatutnya kawasan hulu menjadi kawasan tumbuh lambat yang diprogramkan untuk fungsi konservasi atau lindung karena menjadi satu kesatuan ekosistem dari hulu sampai ke hilir.

Air adalah satu fase bentuk sumberdaya alam yang secara alamiah mengalami siklus perubahan bentuk. Sumberdaya alam ini pada fase bentuk air menjadi kebutuhan dasar semua mahluk hidup di bumi. Sebagai kebutuhan dasar, air tidak dapat menjadi komoditi (barang ekonomi) yang dapat diperdagangkan dan diberi label harga. Prinsip yang memandang air sebagai komoditi (barang ekonomis) akan menghilangkan fungsi ekologis, sosial, religius dan budaya.

Pengguna air tanah dapat dikenakan beaya masa siklus air. Beaya masa siklus air adalah beaya kerugian yang dialami oleh generasi masa depan akibat pemanfaatan sumberdaya alam masa kini. Nilai masa siklus air dihitung melalui pendekatan valuasi manfaat Iokal sumberdaya hayati dan manfaat lokal sumber air.

Beaya masa siklus air di Iokasi penelitian per hektar hutan sebesar Rp. 2.924.890,- setiap tahunnya. Persepsi dan pemahaman tentang beaya masa siklus air belum sepenuhnya disadari oleh perusahaan air minum dalam kemasan. Akibatnya adalah masih banyak perusahaan belum bersedia ikut berperanserta daiam kegiatan konservasi daerah tangkapan air.

Berdasarkan hasil analisis dan pembahasan dalam tesis ini, dapat disimpulkan sebagai berikut:
1. Tersedianya air tanah berkurang karena terganggunya keseimbangan neraca air akibat penurapan melalui sumur bor lebih besar dan suplesi air tanah.
2. Beaya bagi tersedianya air adalah beaya kerugian yang akan ditanggung oleh generasi masa depan.
3. Pengetahuan dan pemahaman tentang beaya masa siklus air belum sepenuhnya disadari oleh pengusaha air tanah.

Saran dari penulis dalam tesis ini adalah; (1) Perlu dilakukan segera pengendalian ekstraksi air tanah melalui penataan ulang SIPA yang telah dikeluarkan, penutupan sumur bor yang tidak memiliki ijin atau melebihi debit yang diijinkan, penghentian ijin baru dan peningkatan pengawasan pemanfaatan air tanah; (2) Memperbesar suplesi air tanah meIaIui pengendalian pembangunan permukiman di daerah tangkapan air, menghutankan kembali Iahan yang bersudut Iereng lebih dari 30% dan pembangunan ?embung" atau ?waduk kecil" sebagai sumber air bersih untuk memenuhi kebutuhan penduduk; (3) Perlu disosialisasikan secara luas kepada masyarakat tentang beaya masa siklus air. (4) Perlu disosialisasikan paradigma air sebagai hak asasi manusia. Setiap orang berhak memperoleh air bersih khususnya air minum dan kewajiban negara untuk memenuhinya.
<hr><i>The main source of water in the Sukabumi is the reservoirs found in the Gede Pangrango and Halimun Salak highlands. These areas are the up river of the Cimandiri River which flows south through

Sukabumi all the way to the Southern coastal city of Pelabuhan Ratu, the capital city of Sukabumi District. These water reservoirs, ground reservoirs and spring water, have been used in the upper regions for many years. The use of the ground water for domestic needs and industrial needs is increasing rapidly. Revenue through the use of these water resources by industry has not been charged with conservation cost of these resources.

As the use of water has increased exponentiaily, supply tends to decrease due to the destruction of the upper catchments areas that are now being developed or destroyed. Internal control in the areas with their hydrology functions are being assessed in order to over come the problem before it gets out of hand.

The aim of this study is to estimate the current ground water condition, its value through analysis of local economic value of water catchments area and the current price of water. To understand perceptions and ability of water consumers to pay reservation cost of the water catchments area.

Results would enrich information in the effort to preserve natural water resources and natural environment as a unified natural resource. Information obtained may also be useful in future planning and development of these areas.

This research has been carried out in the Counties of Cicurug, Cidahu, Parakansalak, and Parugkuda, from January to June of 2003. The focus area is located at the foot of the Salak Mountain in the area of Sukabumi district. The form of research that has been used is ex post facto through qualitative and quantitative approach. The primary and secondary data were was collected through surveys and studies of literatures.

The result of studies has shown that the area in the vicinity of Gunung Api Tua is located in the main water absorption area, which is also the area of ground water release. Ground water potential is found to be between 100-300 meters below ground surface. The release of ground water from springs is at a rate of 400 It/sec and extracted using drill-wells at a rate of 2 lt/sec up to 5 lt/sec. The balance water measured in this area shows a deficit of as much as 4,4m3 in the year 2003. Ground water deficit tends to continue declining as result of man-made change in the soil covering due to building constructions agriculture as such that disturbs the seepage of rain water into the ground, hence the replenishment, while water extraction continue to increase.

Result of space and area analysis of research area shows that an interaction exists between the water catchments areas, water releasing areas, and the areas where the ground water is naturally stored. Therefore, economic sectors benefit from the ground water supply should not be freed from their responsibility in forest conservation and protection of Salak Mountain as water catchments areas. Using ground water in water areas will eventually reduce or even eliminate the benefit for water draining areas. It should be understood that water catchments area must be considered as areas of conservation and protection, because of its ecosystem unity from water-catchments area to water-released areas.

Liquid water is one phase in the cycle of this resource, which is naturally changing in form and state. In its liquid phase, water is a basic necessity for all living organism on this earth. As a basic necessity, water

cannot become a commodity to be commercialised and given a price label. Considering water as eoonomic commodity will lose its ecological, social, religious and cultural functions.

Water users could be charged with water cycling costs. Water cycle cost is atpenses to cover losses which wlll be experienced by future generations due to present resource ulilisation. The value of water cycle period is calculated by local usage valuation approach of the biological resources and the local use of water resource.

The annual per hectare expenses of water cycle at the site of investigation is calculated at Rp. 2.924.890,-. Perception and understanding in the expenses for water cycling period have not been fully realized by water packing companies. Consequently there are still a great number of companies that are not willing to participate in the effort of water catchments area.

Water is only one phase of a natural cycle that is always moving. This natural resource when it is in the water phase is essential to the life of all animals on earth. As a basic need water can not beoome a commodity that can be sold with a label and a price, it is priceless. The principle that view water as a commodity will absolutely destroy its ecological, social, and cultural function and even will threaten our religious foundations. All humans have rights to have clean water, and it is not a commodity.

Water cycle cost in research area per hectare forest is Rp. 2.924.890,- every year. Perceptions and understanding about water cycle cost is not completely realized by water-packing company. As result, there still many companies that weren?t willing to participate in conservation program of water-catchments area.

Conclusions of research result and discussion in this thesis are: 1) There is deficit of ground water in research location as result of disturbances the equilibrium of water scale. The disturbances is caused by the used of ground water through artificial pump-well that larger than infiltrate of water volume. There is company that used ground water in water-absorbent areas and water-released areas In Salak Mountain areas. Ground water that is extracted from those areas are products of conservation forest water-catchments area; 2) Water cycles should be included in production total cost by water ground user. The value of water cycles cost can be calculated through valuation approach of local benefit of natural resources and local benelit of water resources; 3) Even though the water cycles cost cannot implemented yet for ground water benefit management, the valuation approach can be easily used by people in community so that the used of the valualjon need to be socialized.

Suggestions from writer in this thesis are: a) we need to do more detail assessment about ground water storage, b) it is necessary to socialized water paradigm as human rights. Every human have rights to have clean water especially drinking water and it is obligation of the country to fulfil it; c) Some studies should be done so that water- cycle cost policy can be implemented. The study that can be done is study of scarcity rent and extraction cost; d) To minimize bias from calculating economic benefit from natural resources, we need to choose respondents accurately from areas that closed or those who lived near the forest.</i>