STRATEGIC PLANNING WITH ENVIRONMENTAL COMPONENT

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Strategic planning with environmental component is a function of management. It is the process that can help to put ecological goals as well as to achieve them.
Nowadays, planning of ecological factors assumed to be a basis for all management decisions.
The main purpose of this research is the formation of environmental and economic strategy of organization that corresponds to the principles of sustainable development.
During this research the forecast model has been created, that illustrates the main negative environmental impacts. These calculations were made on the basis of information provided of Joint Stock Company "Mozyr Oil Refinery".
The regression analysis was used for the forecasting factors calculation. This method allows to reveal the level of dependency of the environmental factors (the amount of the sewages, waste, specific factor of emissions into the atmosphere (per ton of processed raw material)) from factors of production activity (the volume of the raw material processing, deterioration of the active part of the fixed capital stock, share of the diesel fuel with sulphur content of 10 ppm in general volume, share of the high-octane petrol in general volume of the petrol).

Factor year the amount of the sewages,
cubic meter waste,
tonnespecific factor of emissions into the atmosphere (per ton of processed raw material),
kg / tonne the volume of the raw material processing, thousand ton
deterioration of the active part of the fixed capital stock, % share of the diesel fuel with sulphur content of 10 ppm in general volume, % share of the high-octane petrol in general volume of the petrol, %

	Y1	Y2	Y3	X1	X2	X3	X4	
2007	7300	29000		3,38	10070,5	49	4,2	83,7
2008	6900	34000		3,2	10569,1	58,2	6,3	81
2009	7200	71000		3,03	10657,3	62,8	3,7	84,9

The regression analysis allows to exclude from the further research such factors, as deterioration of the active part of the fixed capital stock and share of the diesel fuel with sulphur content of 10 ppm in general volume, as the factors of correlation is rather insignificant (below 0,01) and both these factors are interdependent.

	X1	X2	X3	X4
X1	1			
X2	0,981309	1		
X3	0,200191	0,007909	1	
X4	-0,0786	0,114708	-0,99246	1

The general look of the regression equation is following:
$Y = AX + B$

where Y – value of predictable factor;
A –coefficient of correlation;
X – level of influence;
B – value of predictable factor when AX = 0.

So, the regression equation for each environmental factor will have the following type:

$Y1 = 3671,47 - 0,34X1 + 84,7X4$;

$Y2 = - 1212418 + 54,7X1 + 8250X4$;

$Y3 = 11,37 - 0,00053X1 - 0,03156X4$;

where Y1, Y2, Y3 – the amount of the sewages, waste, specific factor of emissions into the atmosphere (per ton of processed raw material), respectively;

X1, X4 – the volume of the raw material processing, share of the high-octane petrol in general volume of the petrol, respectively.

The forecast of main environmental factors of the plant for last two years was made on the basis of the calculated dependencies.

year the environmental factor	2007	2008	2009	2010	2011
the amount of the sewages, cubic meter	7300	6900	7200	7250	7124
waste, tonne	29000	34000	71000	56750	48320
specific factor of emissions into the atmosphere (per ton of processed raw material),kg/tonne	3,38	3,2	3,03	3,28	3,18

Therefore, it can suppose that future production activity of the plant will reduce of the negative environmental impact.

For the present-day strategic planning with environmental component is generally used by big companies. However, it may be suggest that situation will change and more and more companies will start to use forecasting models to control environmental activity.