Having sub-linear regret

Can we get sub-linear regret i.e. $\lim_{T \to \infty} \frac{\text{Regret}_T}{T} = 0$?

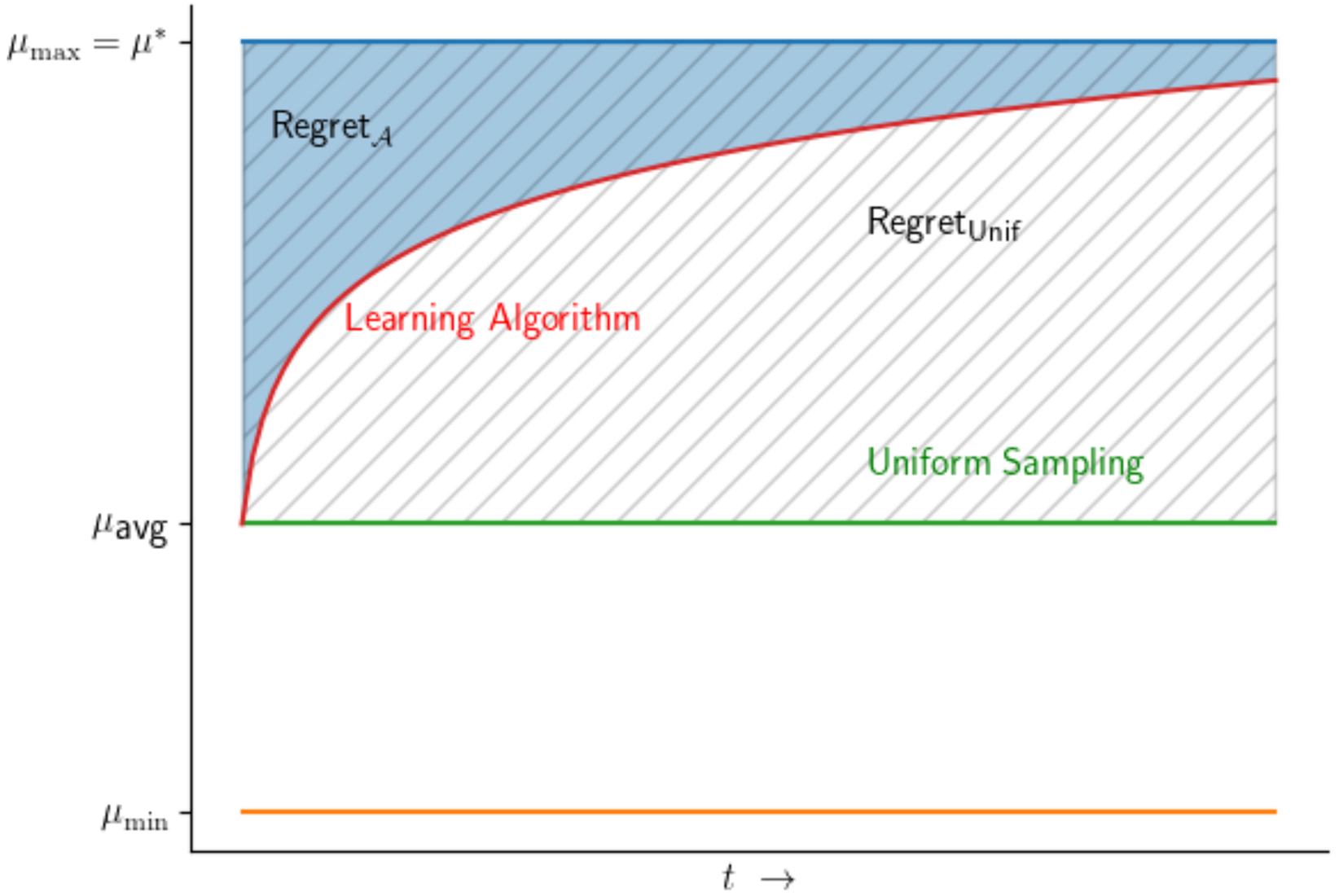
Recall that:

$$\frac{1}{T} \times \text{Expected total reward till time } T = \text{Mean reward of best arm } (\mu^\star) - \frac{\text{Regret}}{T}$$

Thus having $\frac{\text{Reg}_T}{T} \to 0$ implies:

$$\frac{1}{T}\text{Expected total reward} \to \text{Mean of best arm } (\mu^\star)$$

Regret simplified



$$\mu_{avg} = \frac{1}{K}\sum_{a=1}^{K}\mu_a$$

$$\mu_{\min} = \min_{a\in[K]}\mu_a$$