$\mathbb{C}^n \cong \mathbb{R}^{2n}$ $\quad z = (z_1, \dots, z_n) = (x_1 + iy_1, \dots, x_n + iy_n)$

$$\omega_0 = \sum_{j=1}^{n} dx_j \wedge dy_j$$

$$\sum_{j=1}^{n} dz_j \wedge d\bar{z}_j = \sum_{j=1}^{n} (dx_j + i\,dy_j) \wedge (dx_j - i\,dy_j)$$

$$= \sum_{j=1}^{n} (-i\,dx_j \wedge dy_j + i\,dy_j \wedge dx_j)$$

$$= -2i \sum_{j=1}^{n} dx_j \wedge dy_j$$

$$\therefore \frac{i}{2} \sum_{j=1}^{n} dz_j \wedge d\bar{z}_j = \sum_{j=1}^{n} dx_j \wedge dy_j = \omega_0$$

$z \in \mathbb{C}$: $\underbrace{z + \bar{z}}_{\text{expresión compleja.}} \in \mathbb{R} \Rightarrow i(z - \bar{z}) =$

$= -2\,\mathrm{Im}(z)$

$$\omega = i \sum_{j,h=1}^{n} g_{jh}\, dz_j \wedge d\bar{z}_h$$

$$\overline{\omega} = -i \sum_{j,h=1}^{n} \overline{g_{jh}}\, d\overline{z}_j \wedge dz_h$$

$$= -i \sum_{j,h=1}^{n} g_{hj} \left(-dz_h \wedge d\overline{z}_j\right)$$

$$= i \sum_{j,h=1}^{n} g_{hj}\, dz_h \wedge d\overline{z}_j = \omega$$